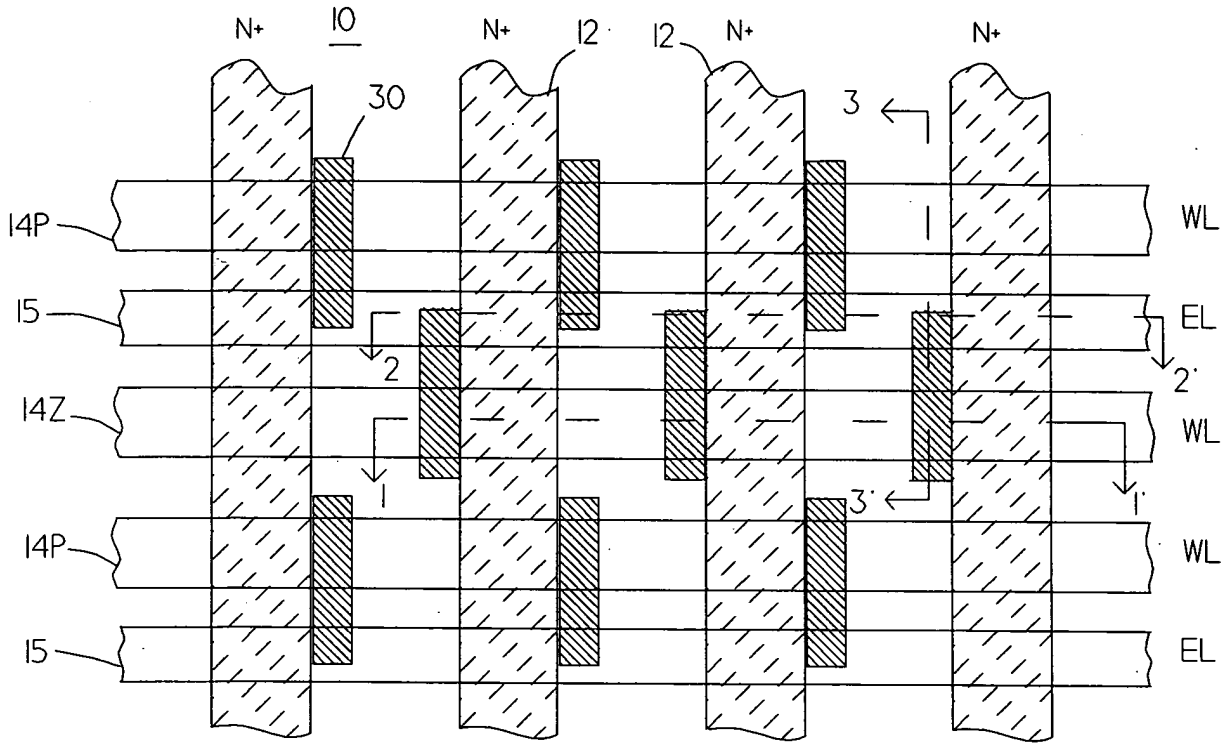


FIG. 1

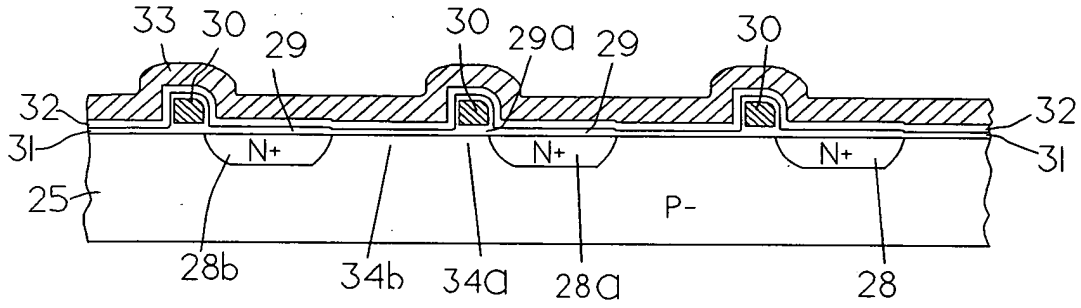


FIG. 2

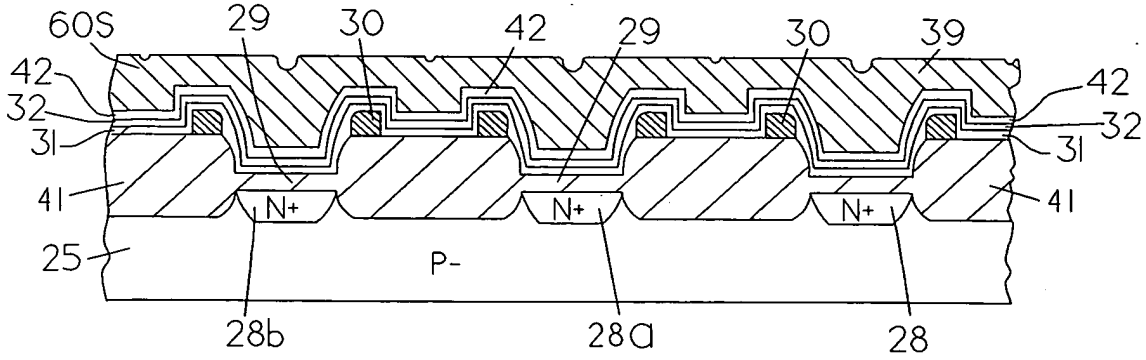


FIG. 3

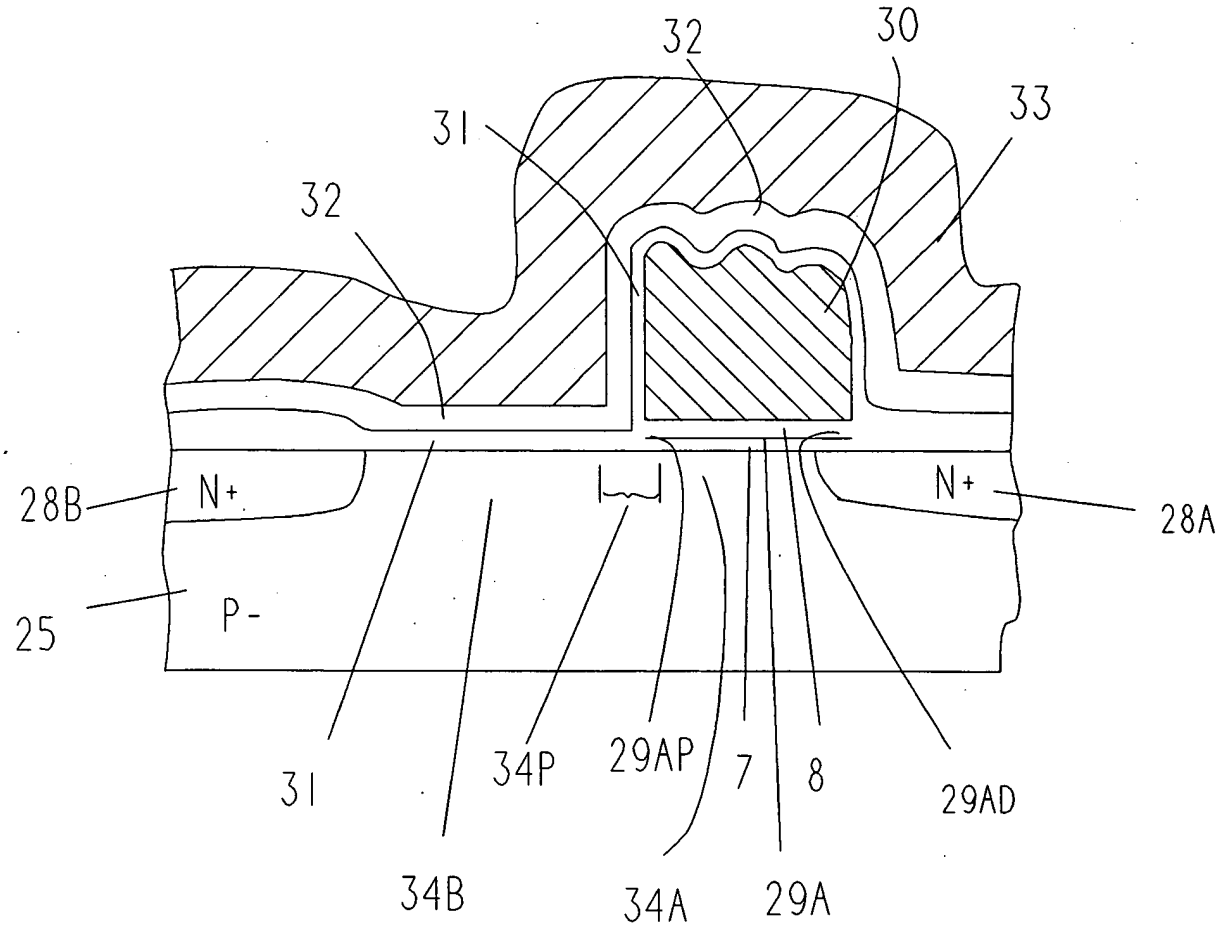


FIG. 2A

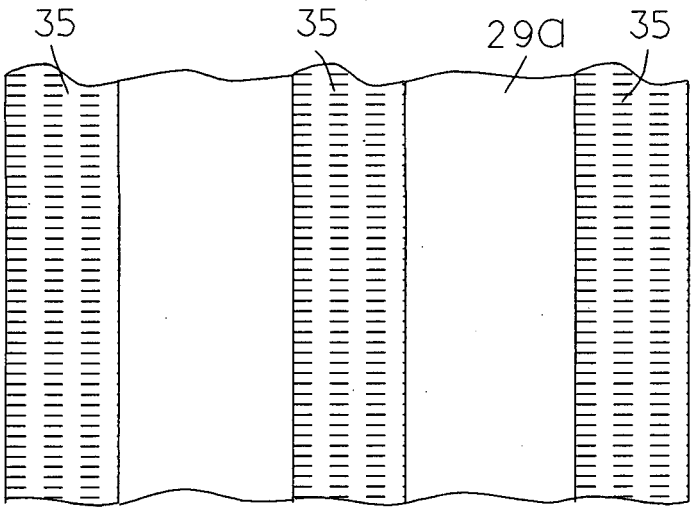


FIG. 4b

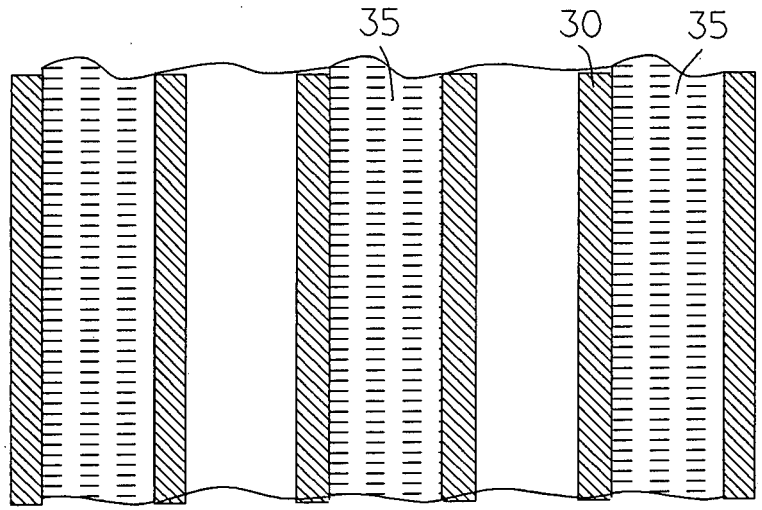


FIG. 6b

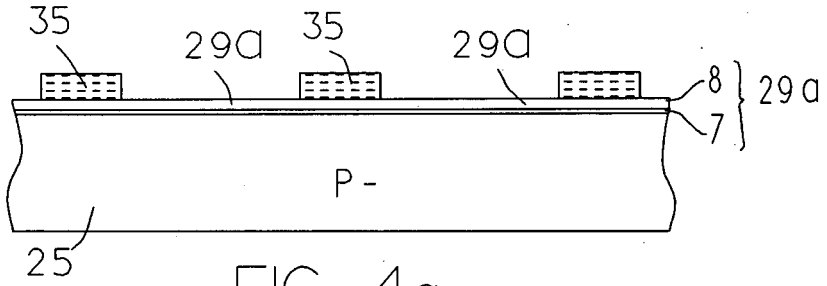


FIG. 4a

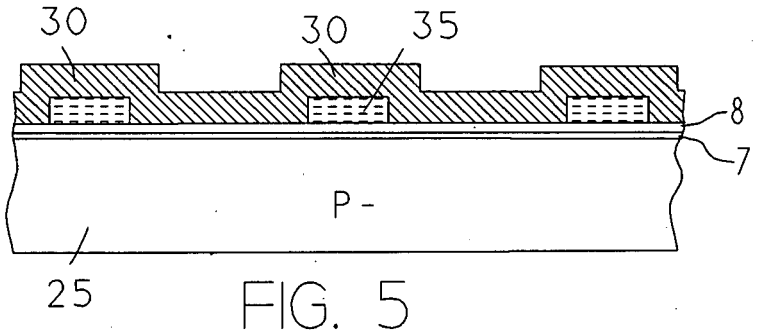


FIG. 5

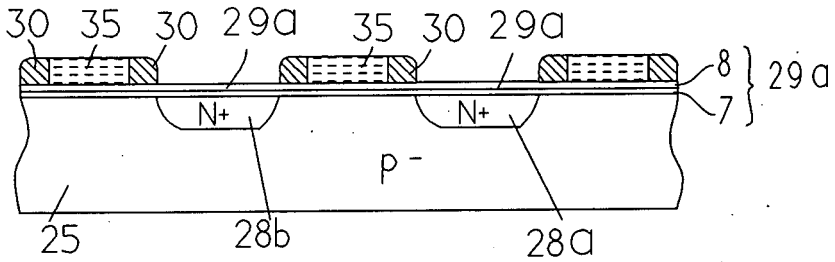
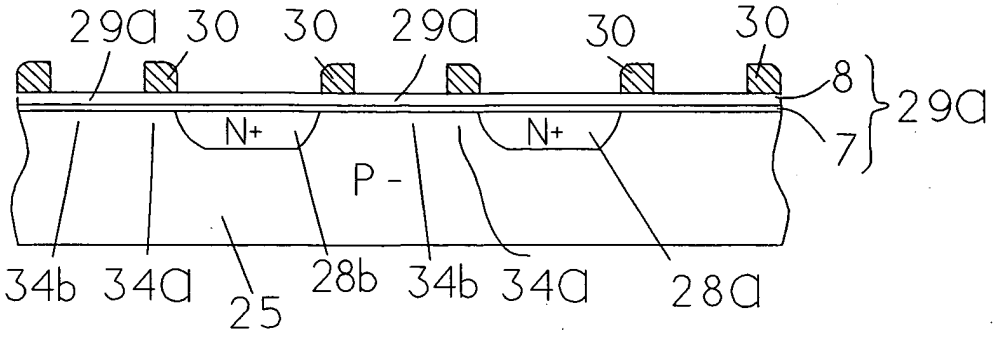


FIG. 6a


29a
30
30
29a
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30
8
7
29a
N+
N+
P -
34b
34a
25
28b
34b
34a
28a

FIG. 7a

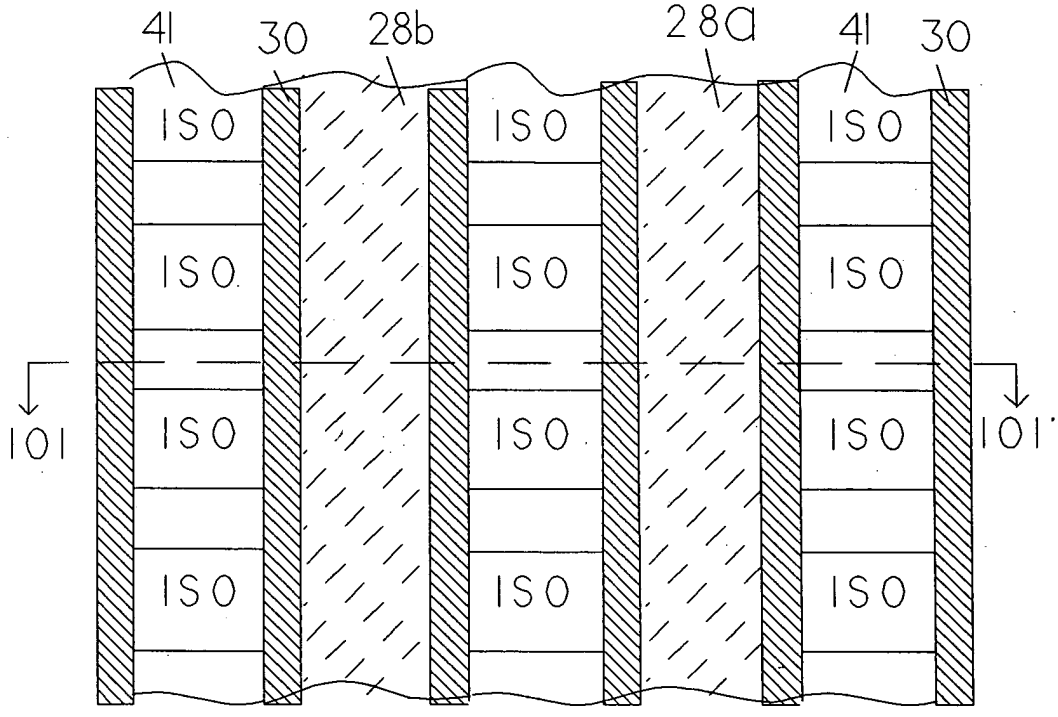
41
30
28b
28a
41
30
ISO
101
101'

FIG. 7b

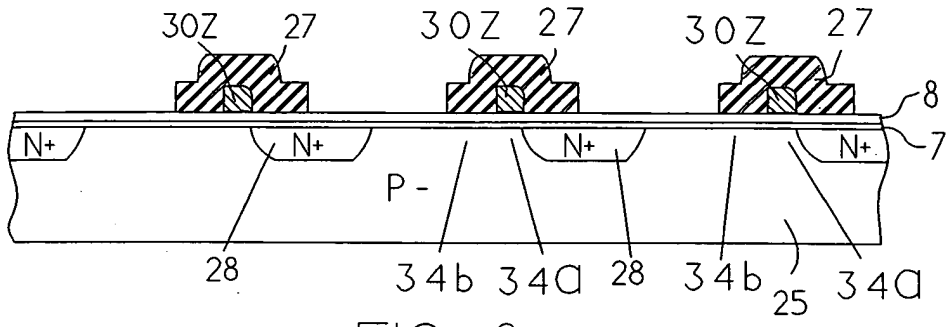

FIG. 8a

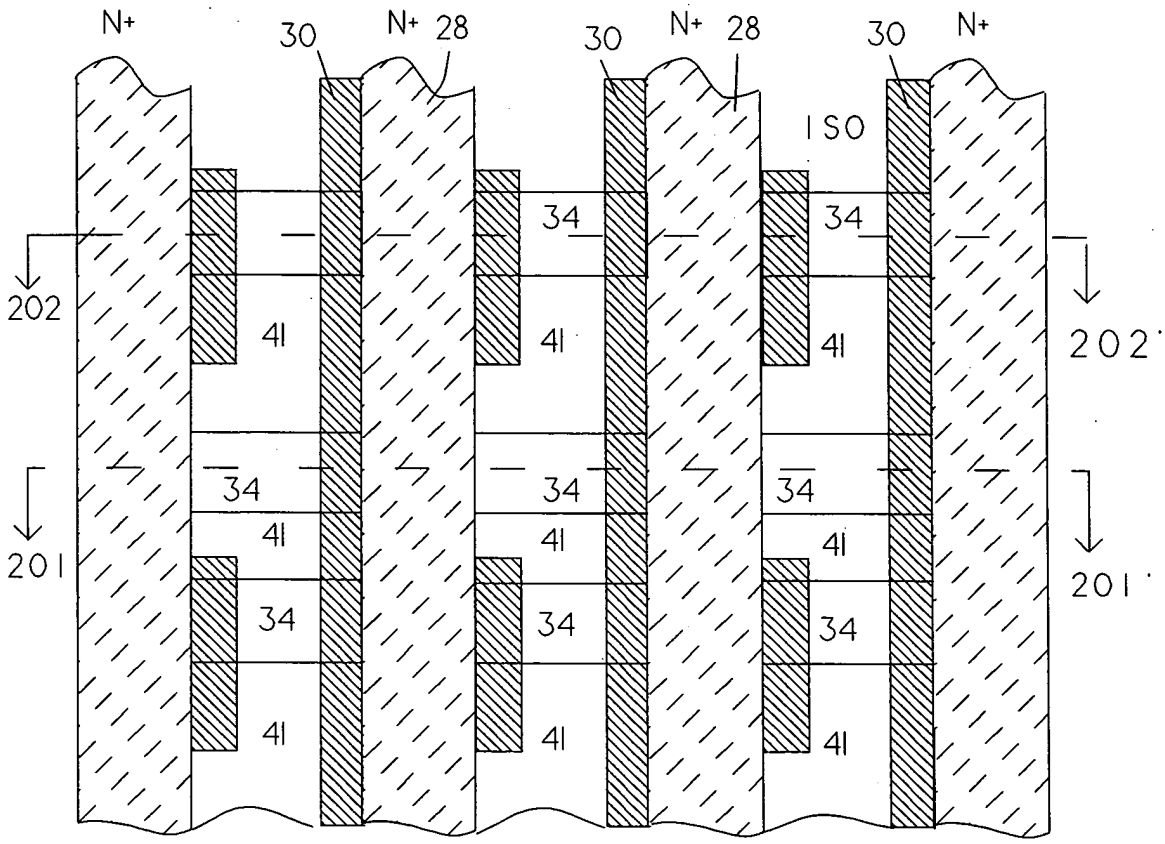

FIG. 8b

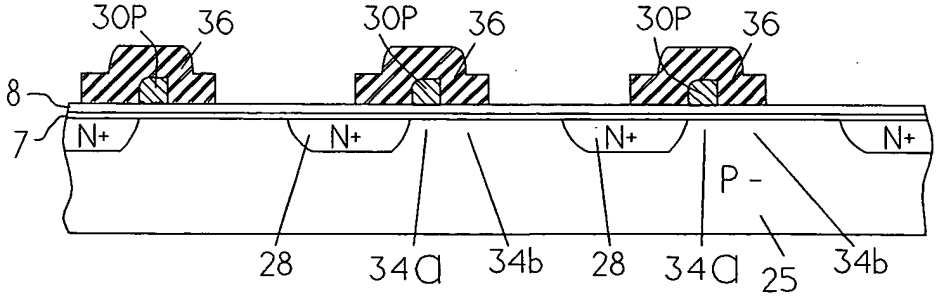

FIG. 9

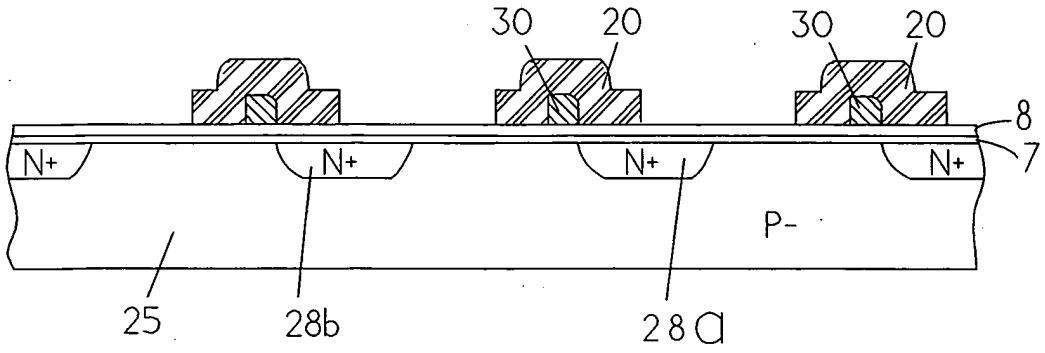

FIG. 10a

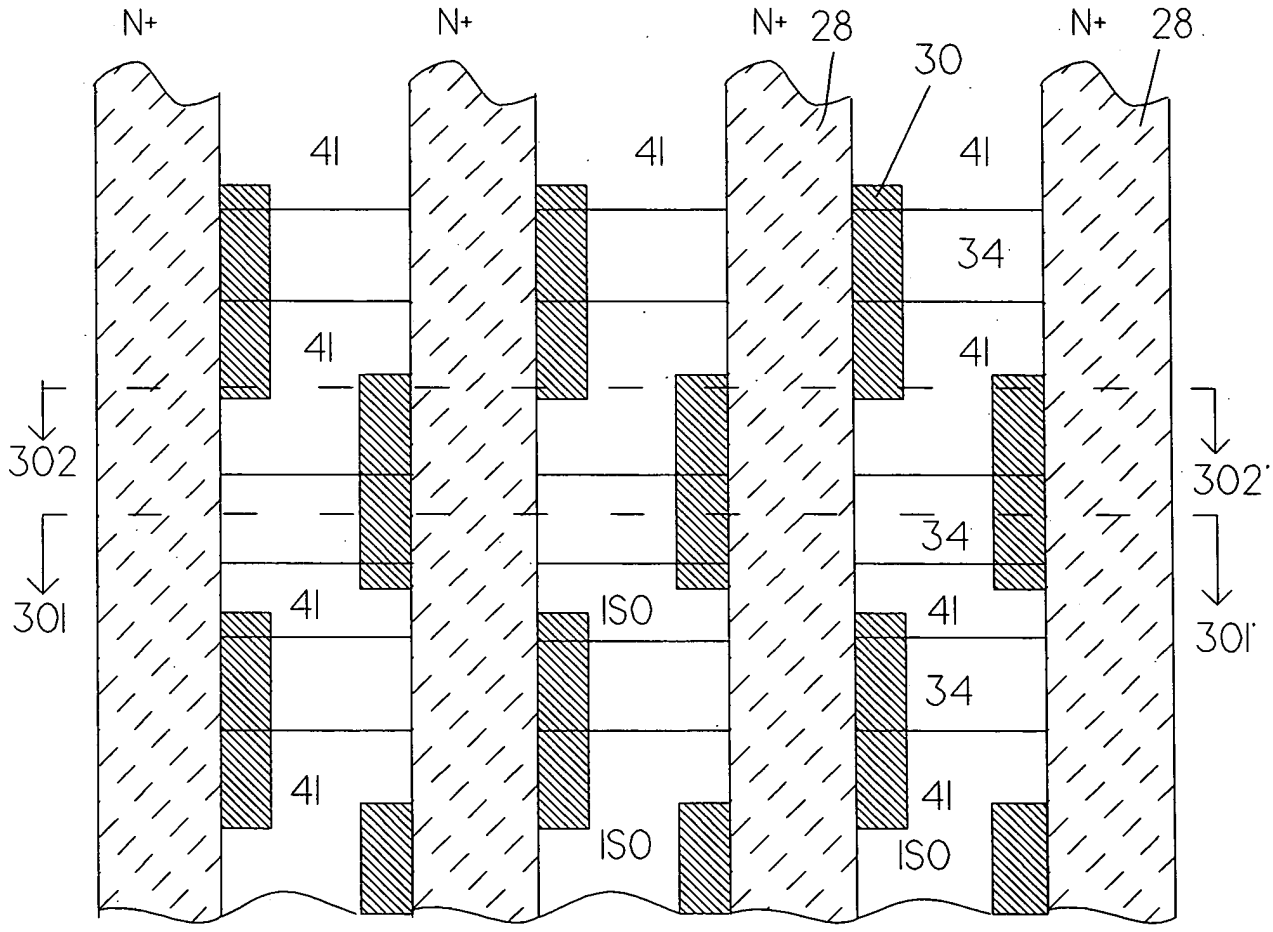

FIG. 10b

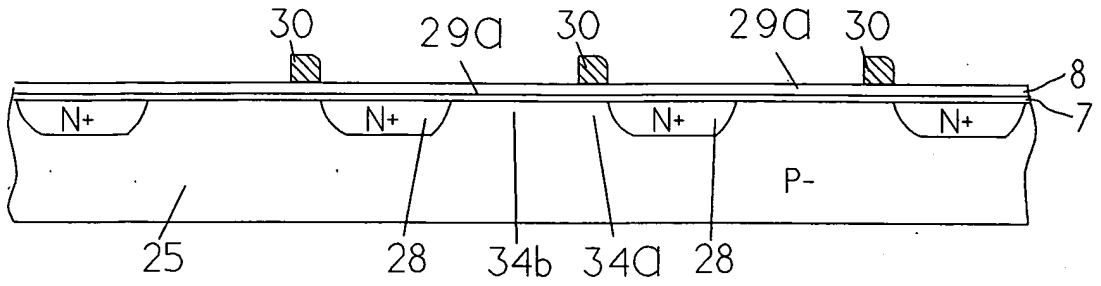

FIG. 11a

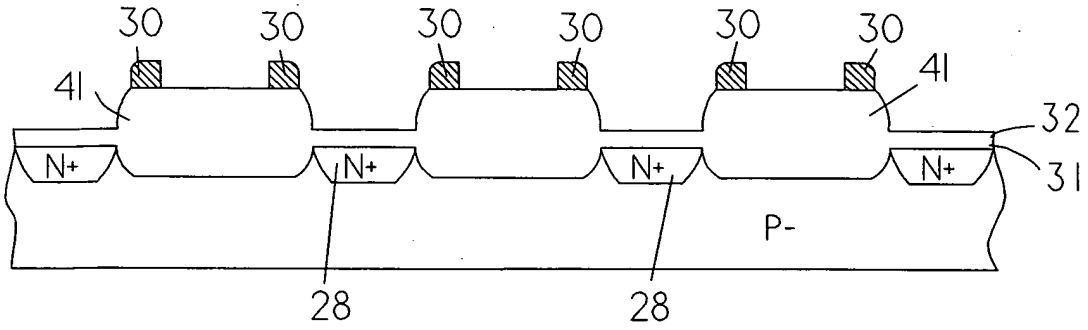

FIG. 11b

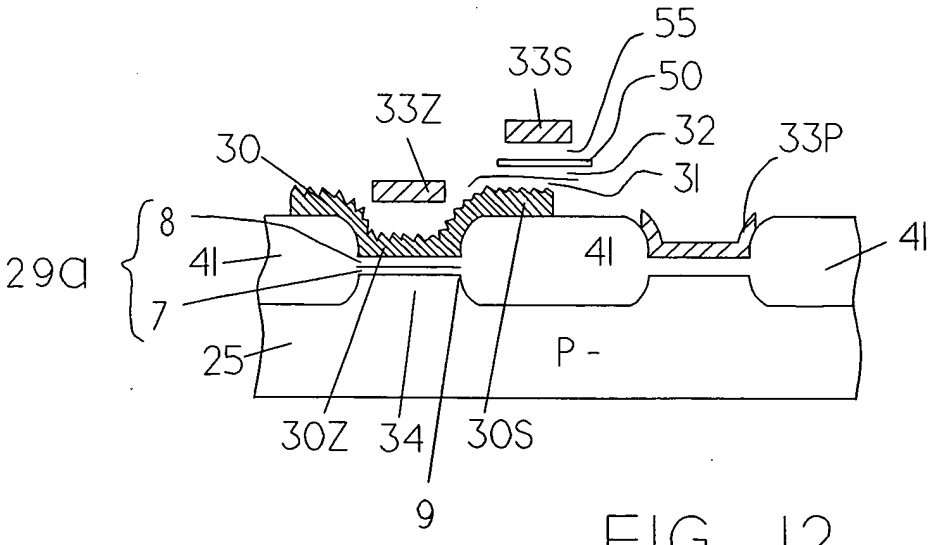

FIG. 12

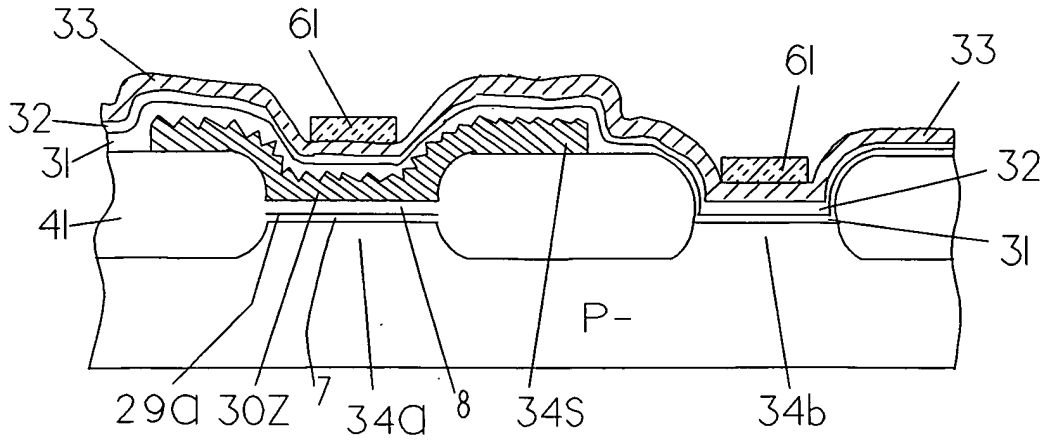

FIG. 13a

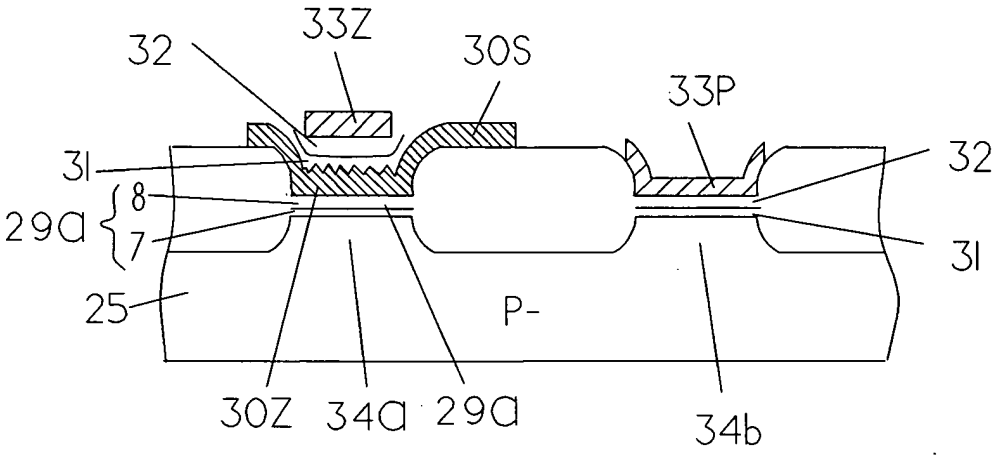

FIG. 13b

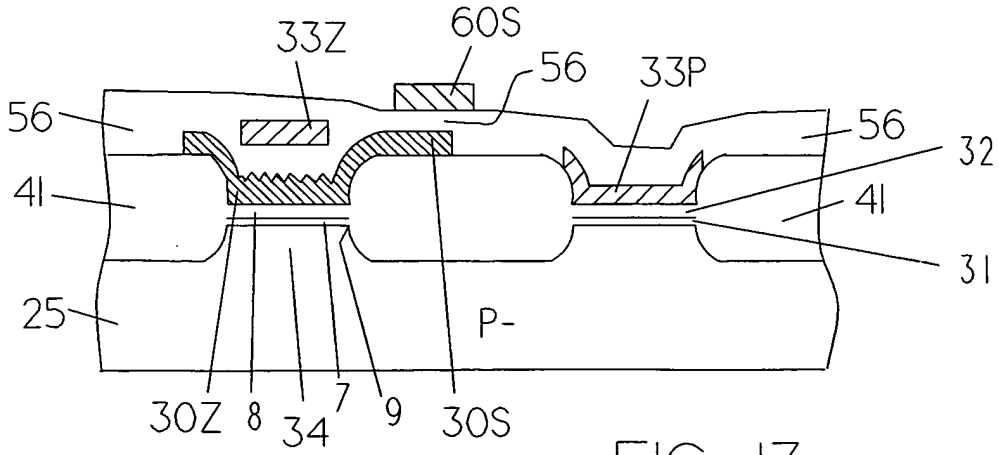

FIG. 13c

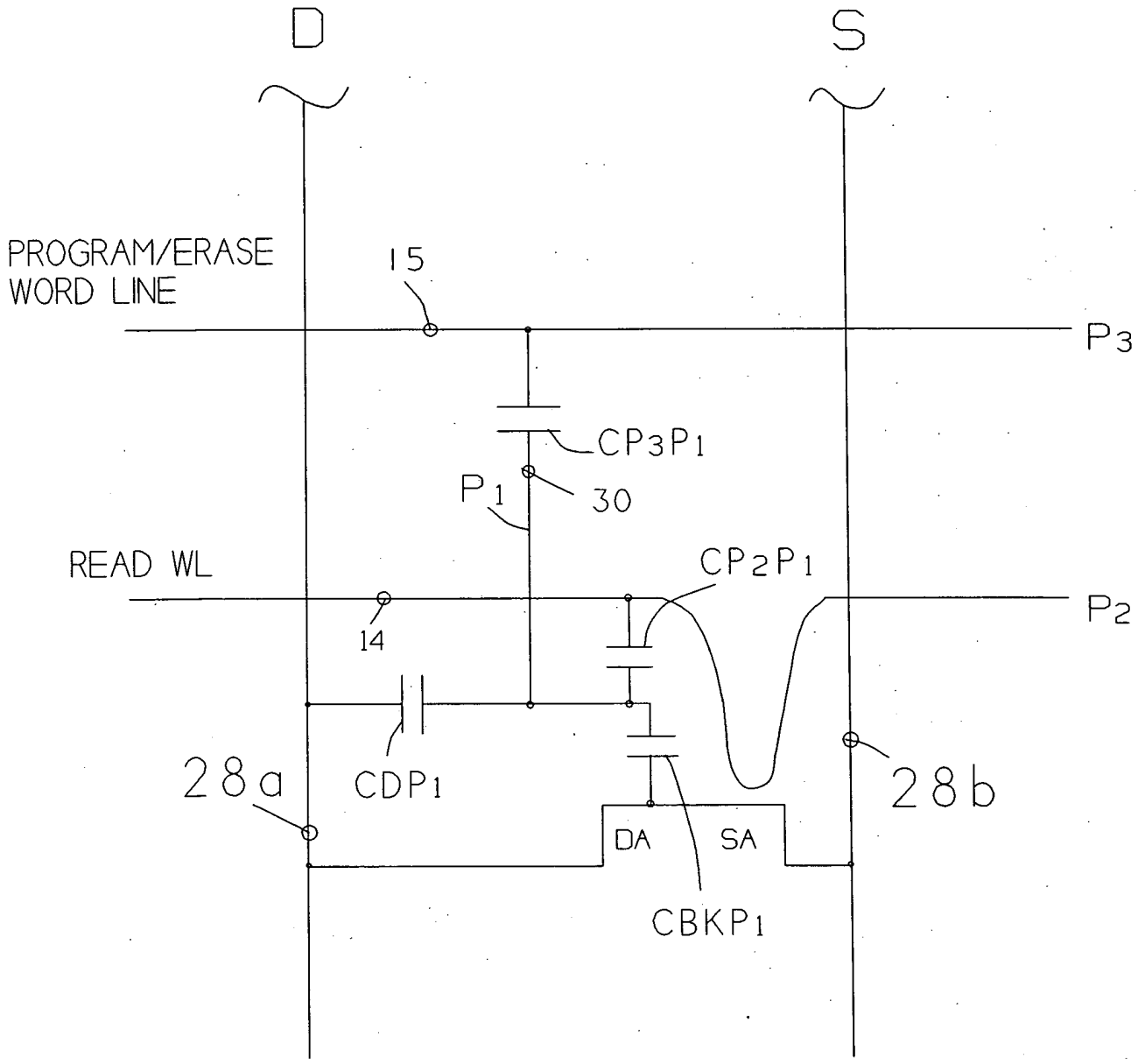
D
S
PROGRAM/ERASE
WORD LINE
15
P3
CP3P1
P1
30
READ WL
CP2P1
P2
14
28a
CDP1
28b
DA
SA
CBKP1

FIG. 14

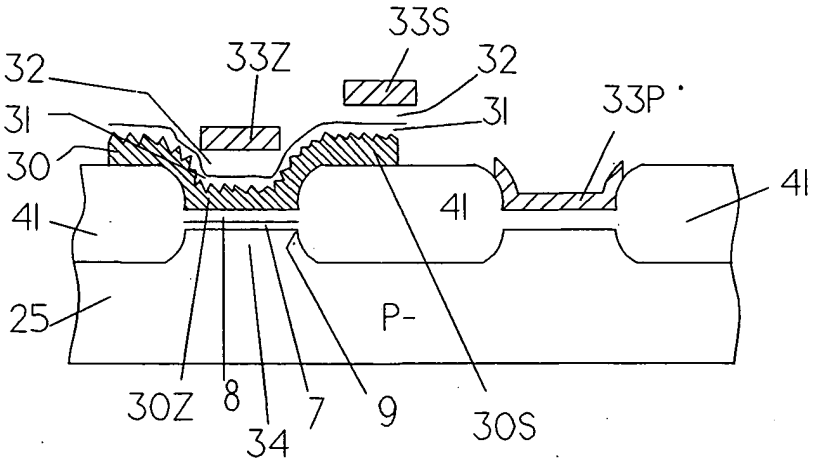

FIG. 15a

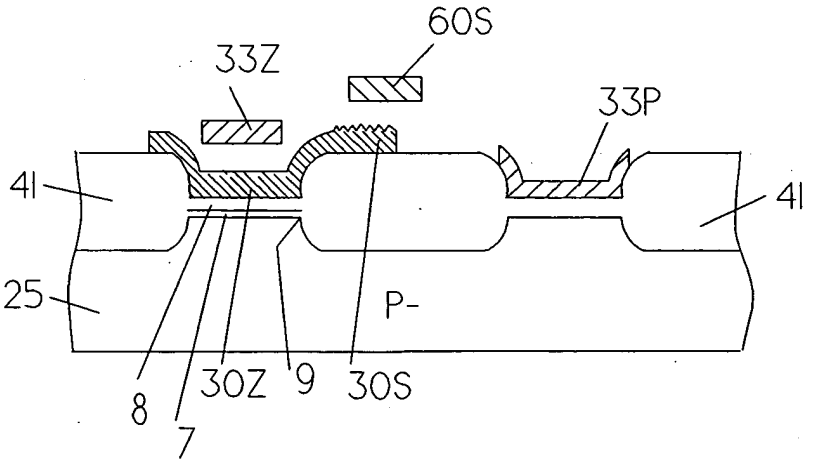

FIG. 15b

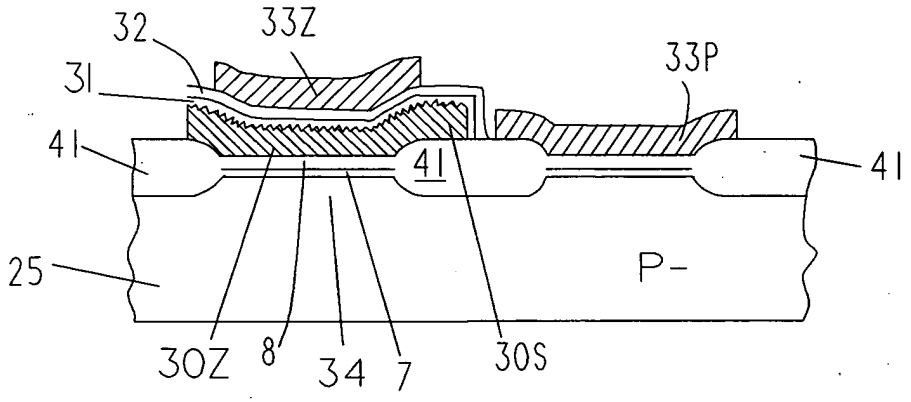

FIG. 15C

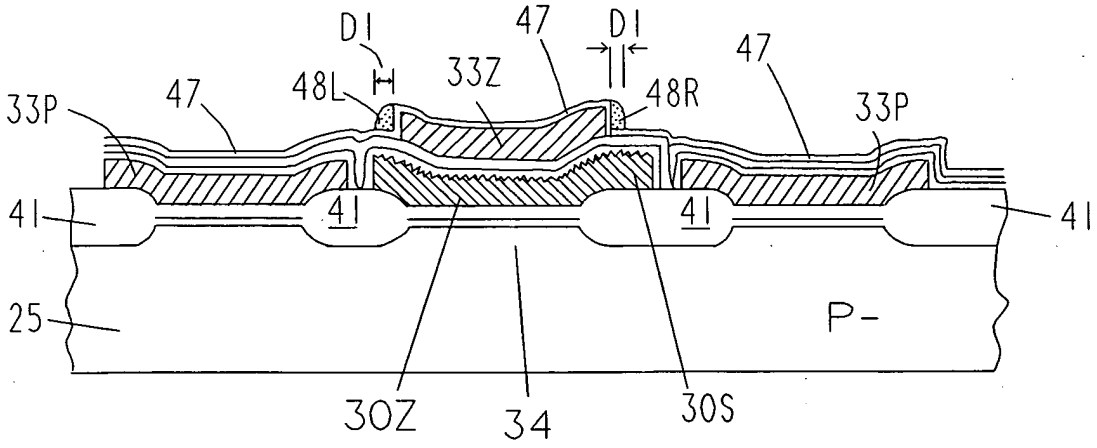

FIG. 15D

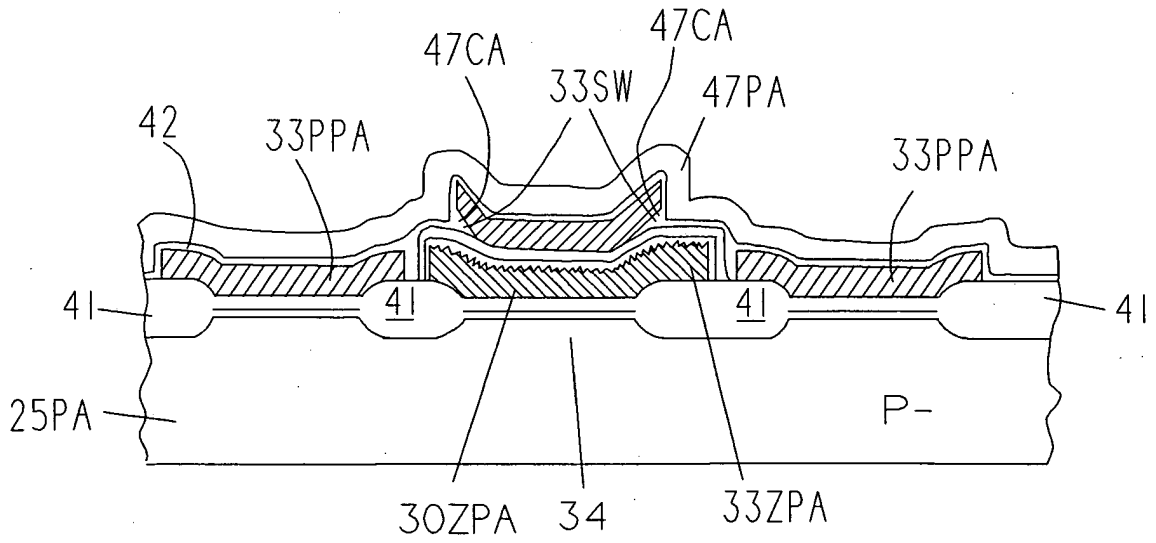
47CA
47CA
33SW
47PA
42
33PPA
33PPA
41
41
41
41
25PA
P-
30ZPA
34
33ZPA

FIG. 15E

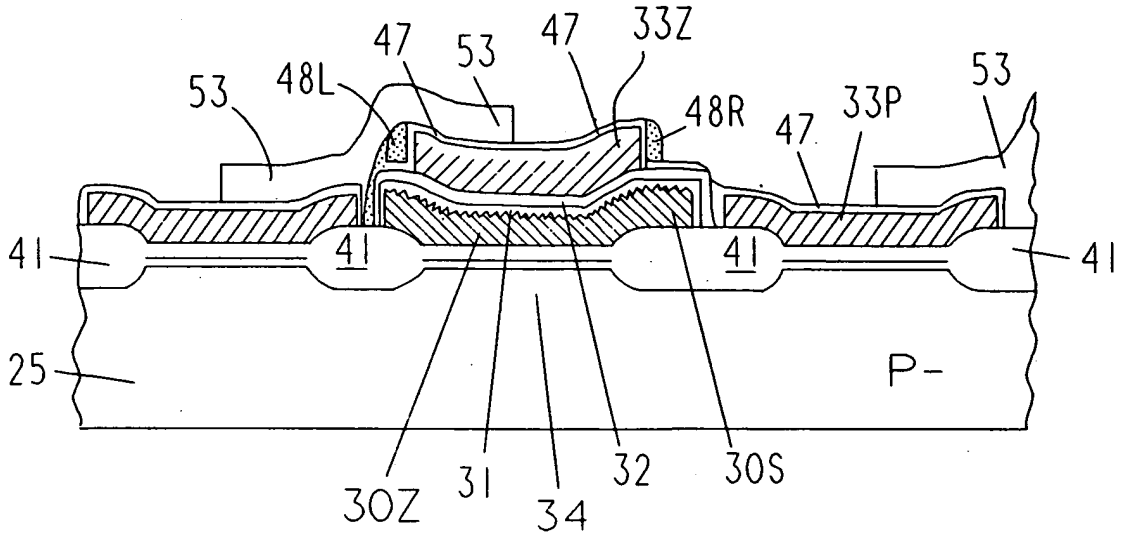

FIG. 15F

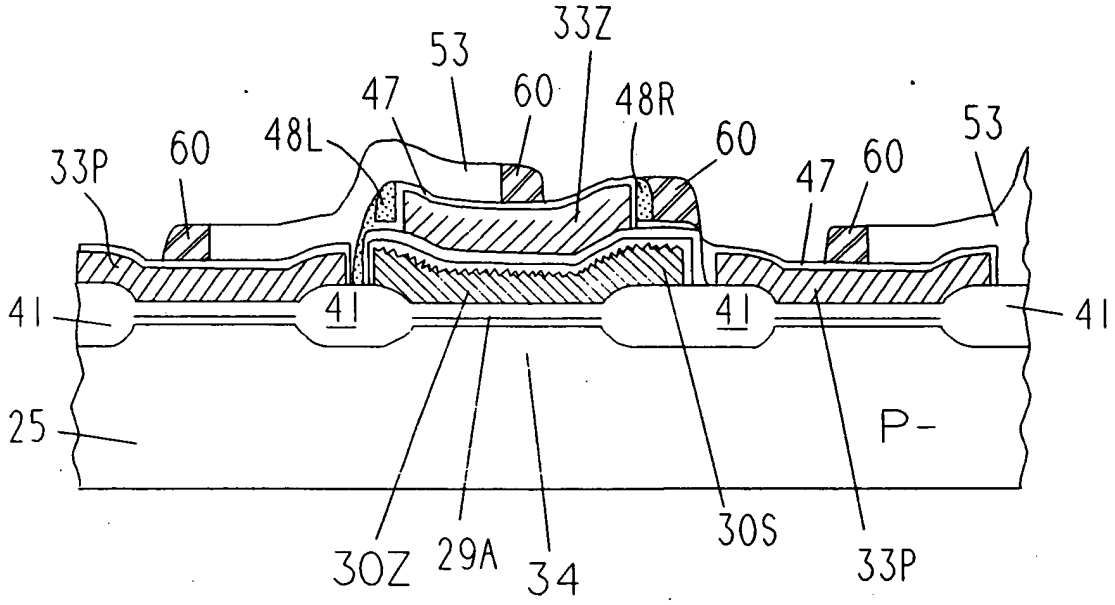

FIG. 15G

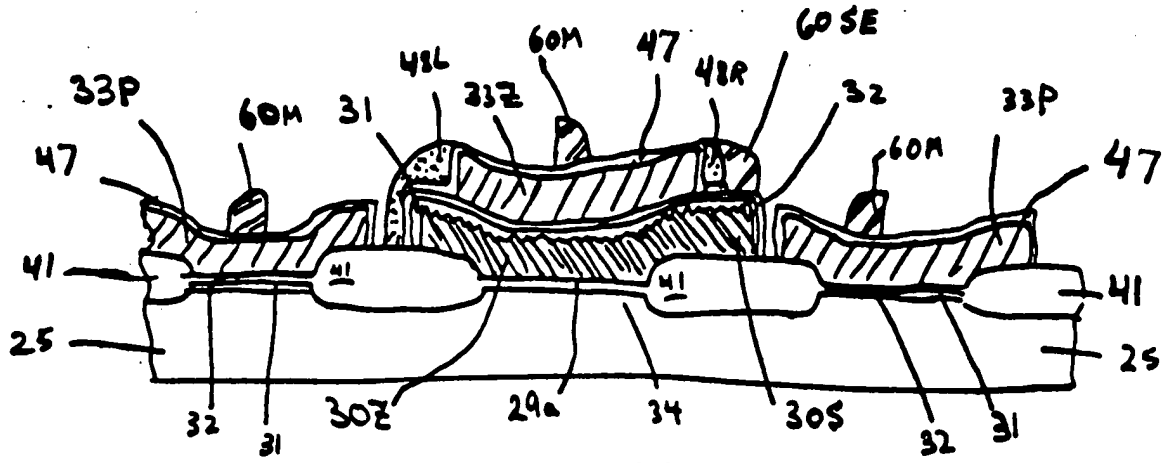

FIG. 15H

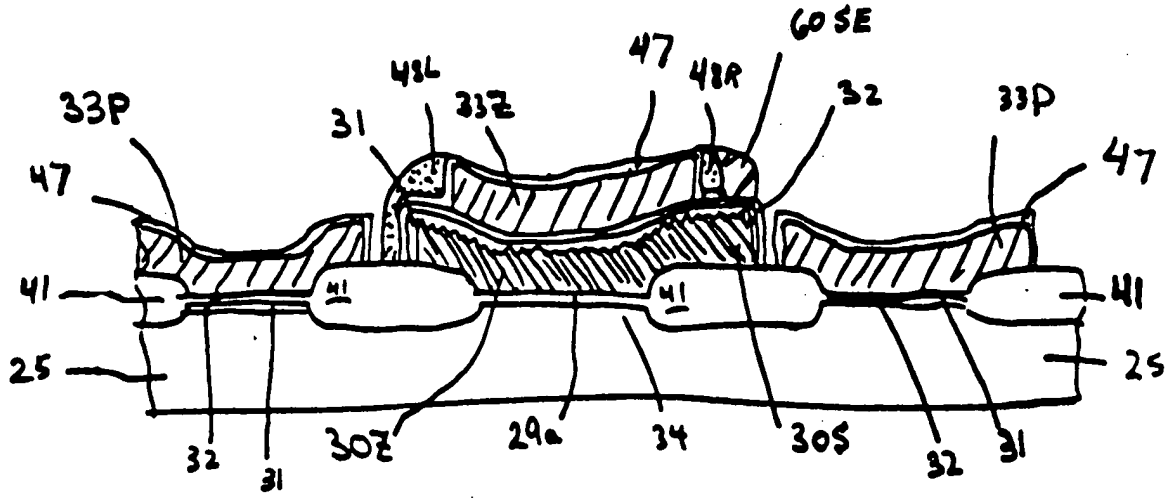

FIG. 15J

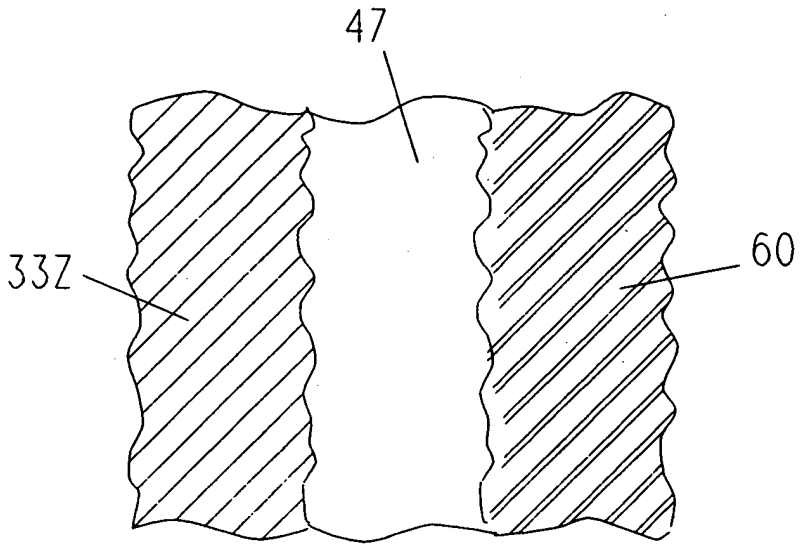

FIG. 15 I

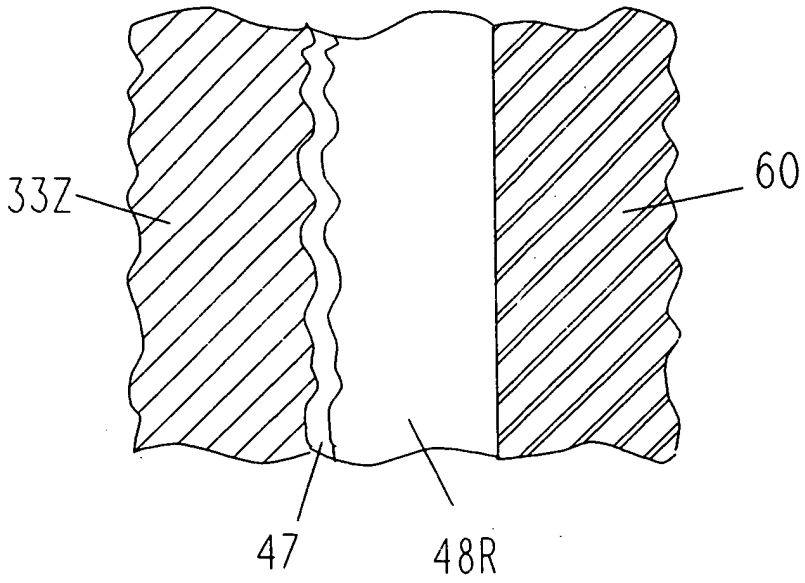

FIG. 15 K

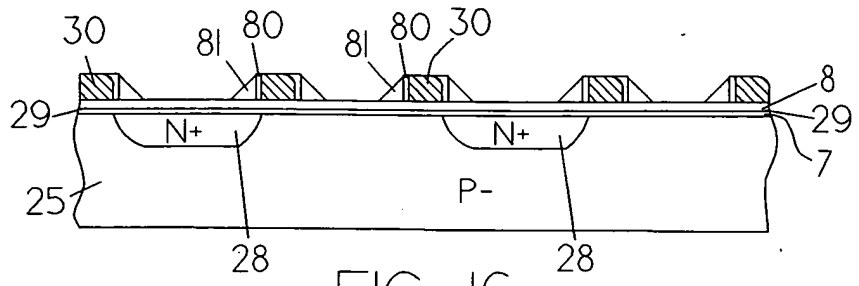

FIG. 16a

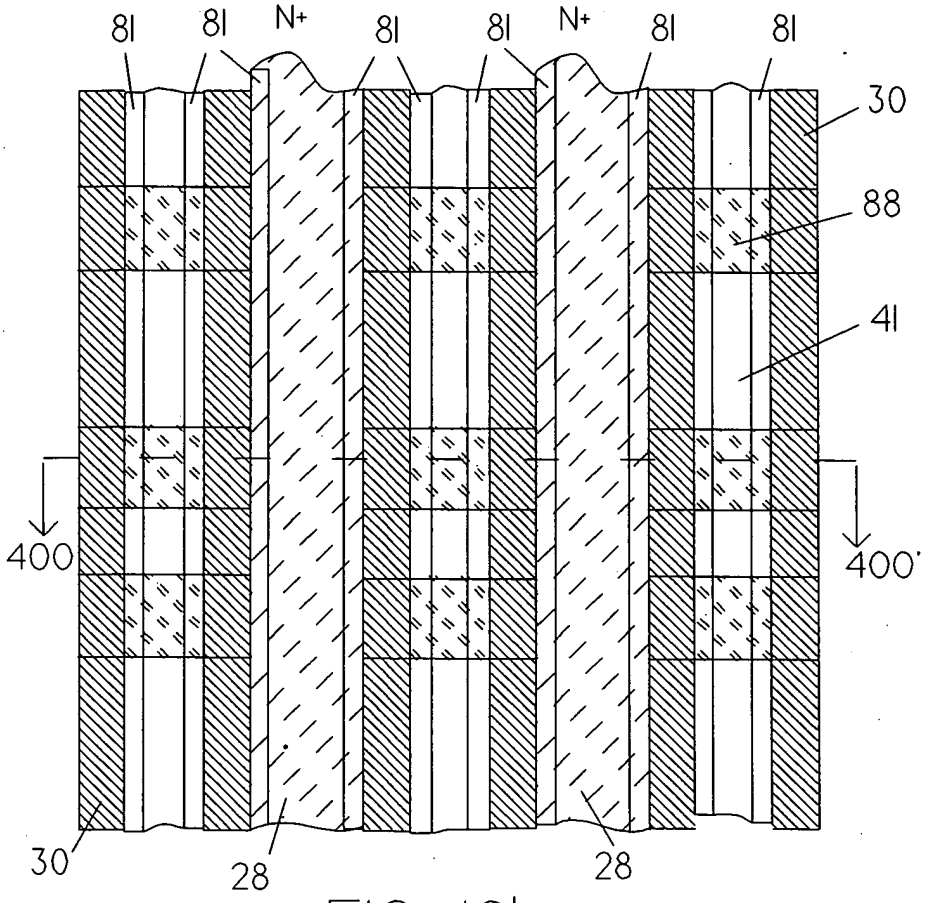

FIG. 16b

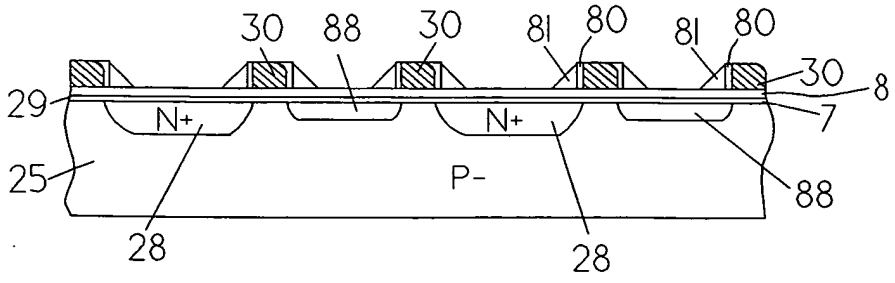

FIG. 16c

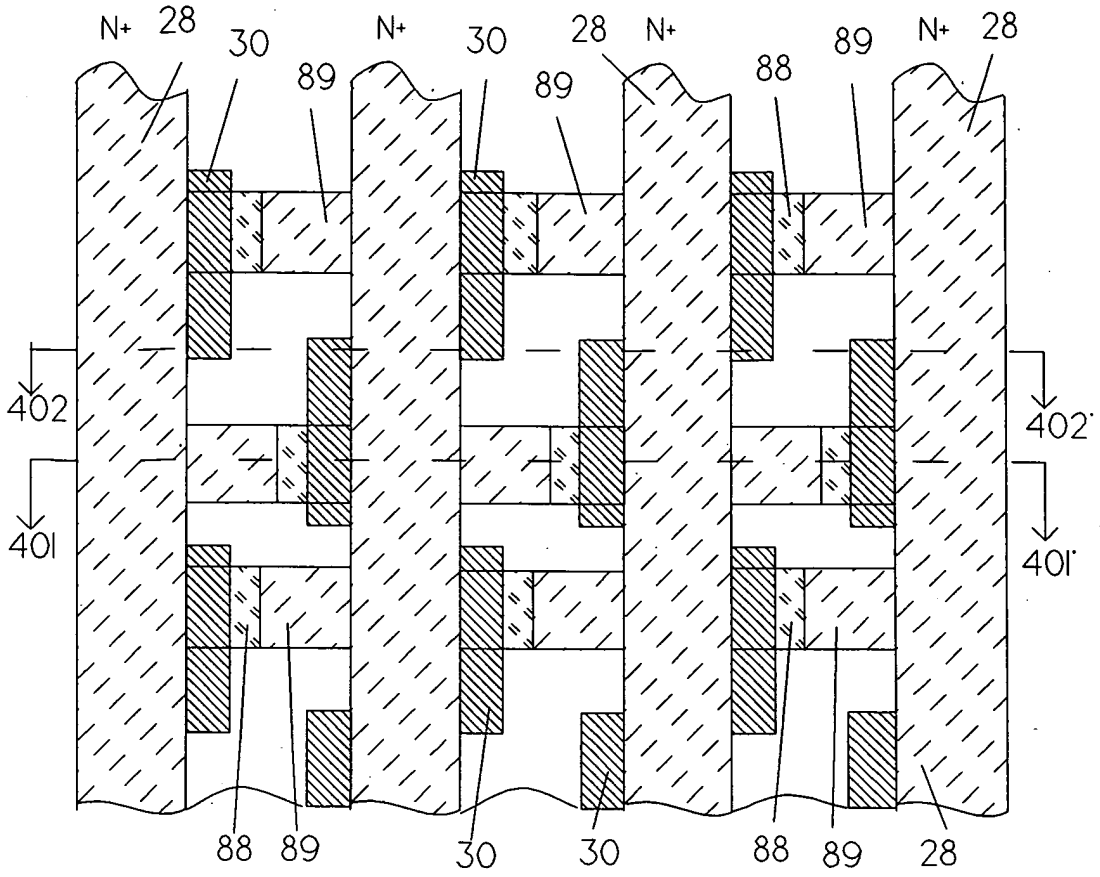

FIG. 17

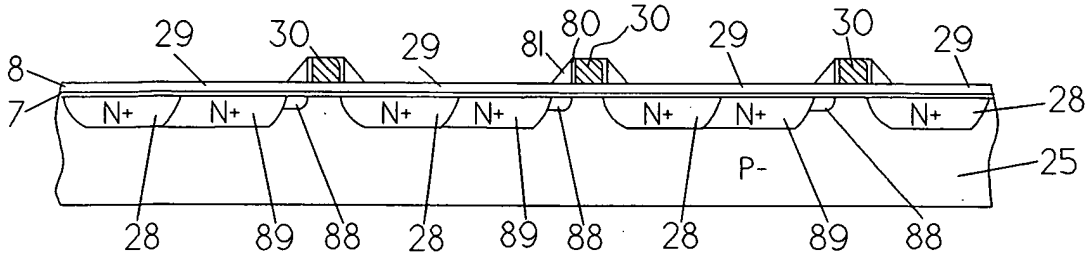

FIG. 18a

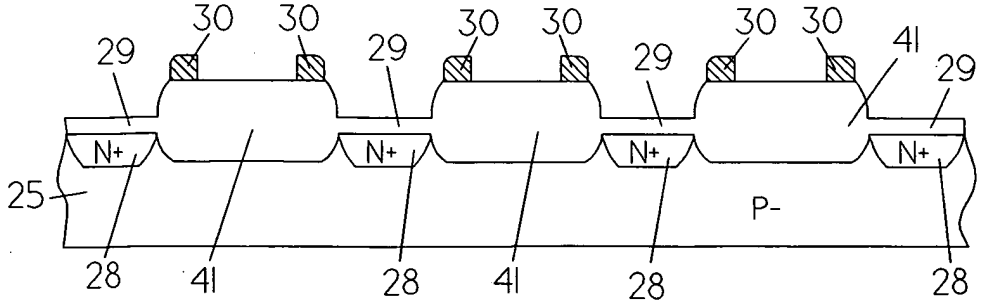

FIG. 18b

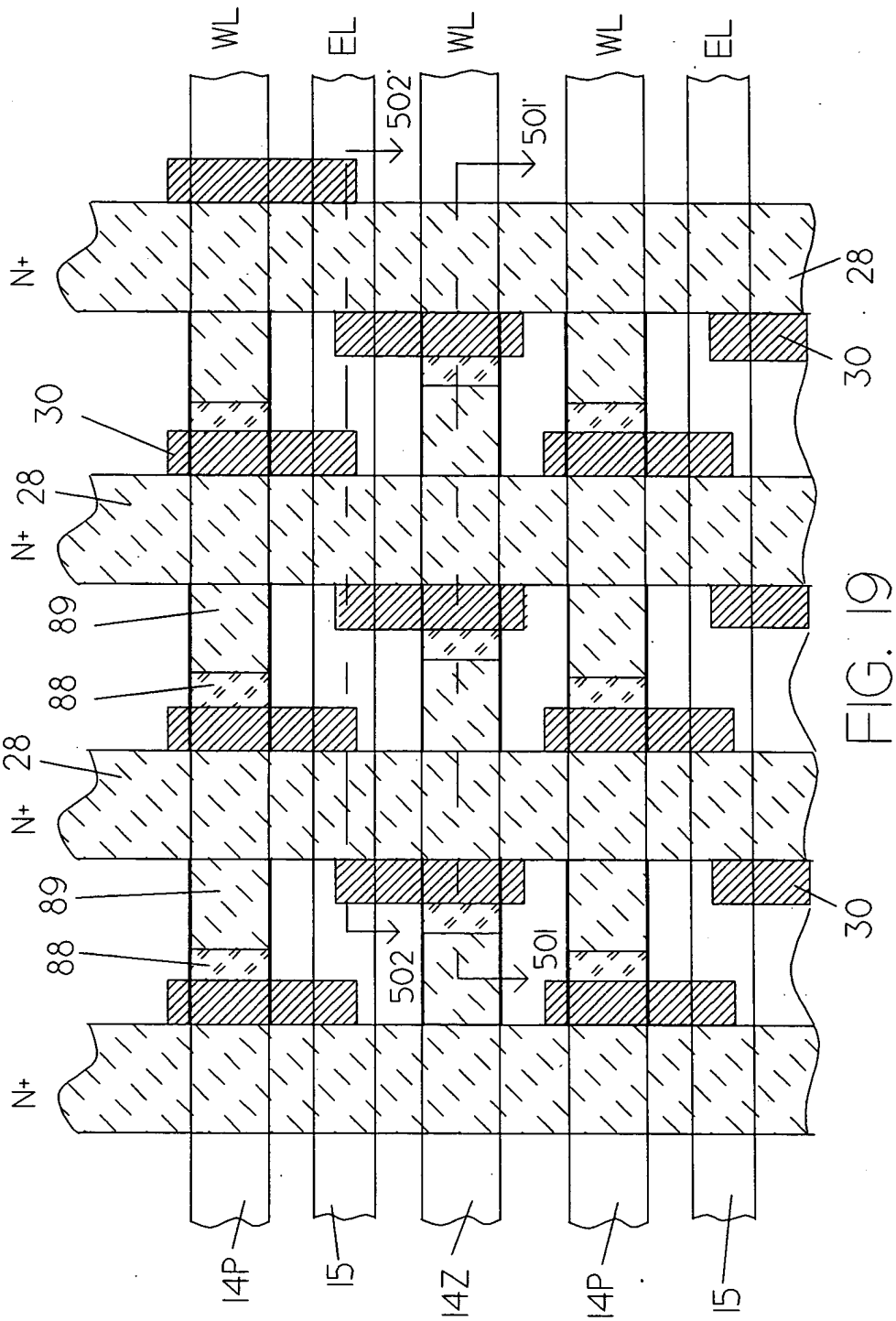
WL
EL
WL
WL
EL
502'
501'
N+
28
30
30
28
N+
89
88
28
N+
89
88
30
502
501
N+
14P
15
14Z
14P
15

FIG. 19

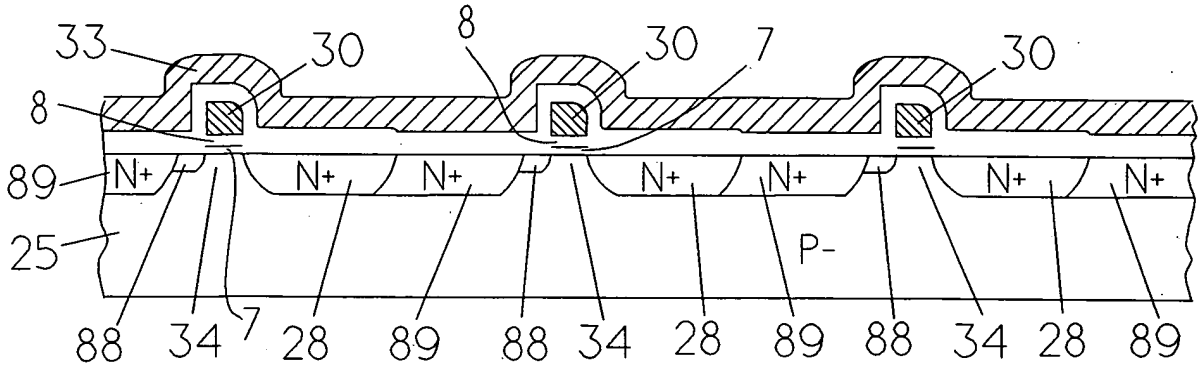
33
30
8
30
7
30
8
89
N+
N+
N+
N+
N+
N+
N+
25
P-
88
34
7
28
89
88
34
28
89
88
34
28
89

FIG. 20

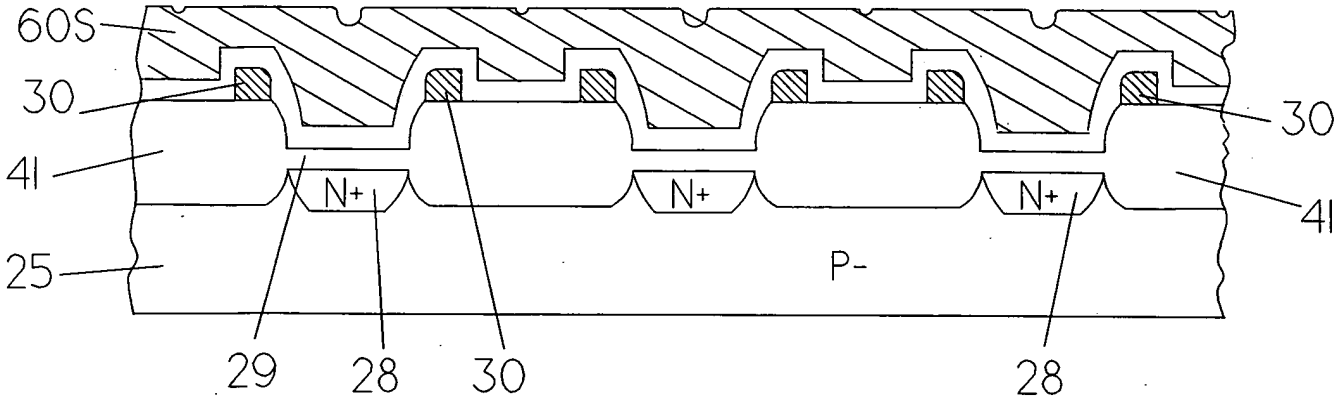
60S
30
30
41
41
N+
N+
N+
25
P-
29
28
30
28

FIG. 21

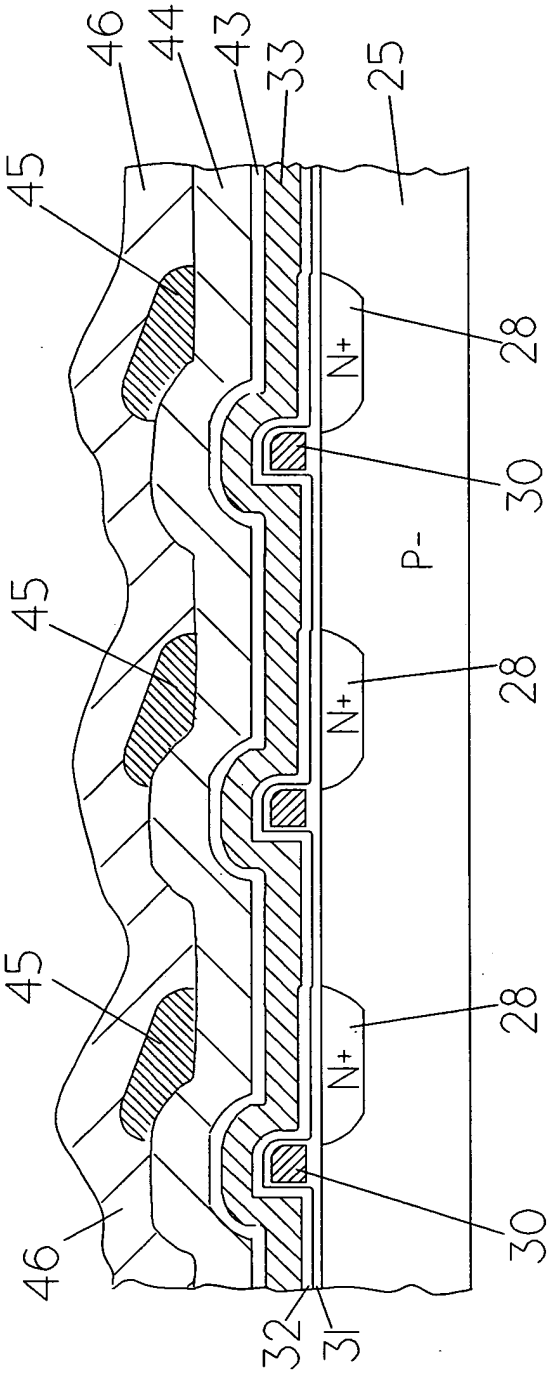

FIG. 22

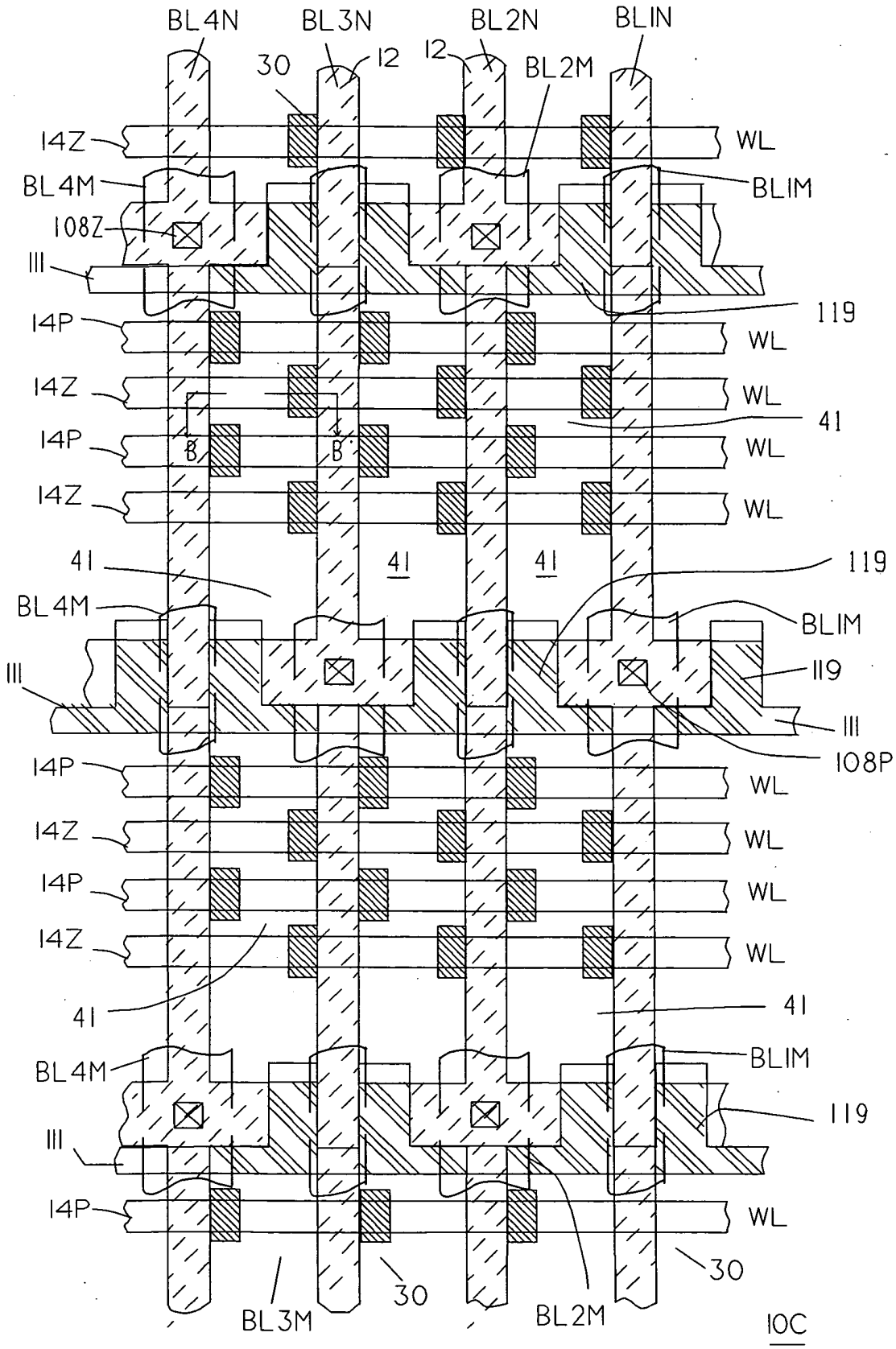
BL4N
BL3N
BL2N
BLIN
30
12
12
BL2M
14Z
WL
BL4M
BLIM
108Z
111
119
14P
WL
14Z
WL
41
14P
B
B'
WL
14Z
WL
41
41
41
119
BL4M
BLIM
111
119
111
108P
14P
WL
14Z
WL
14P
WL
14Z
WL
41
41
BL4M
BLIM
119
111
14P
WL
30
BL3M
30
BL2M
10C

FIG. 23A

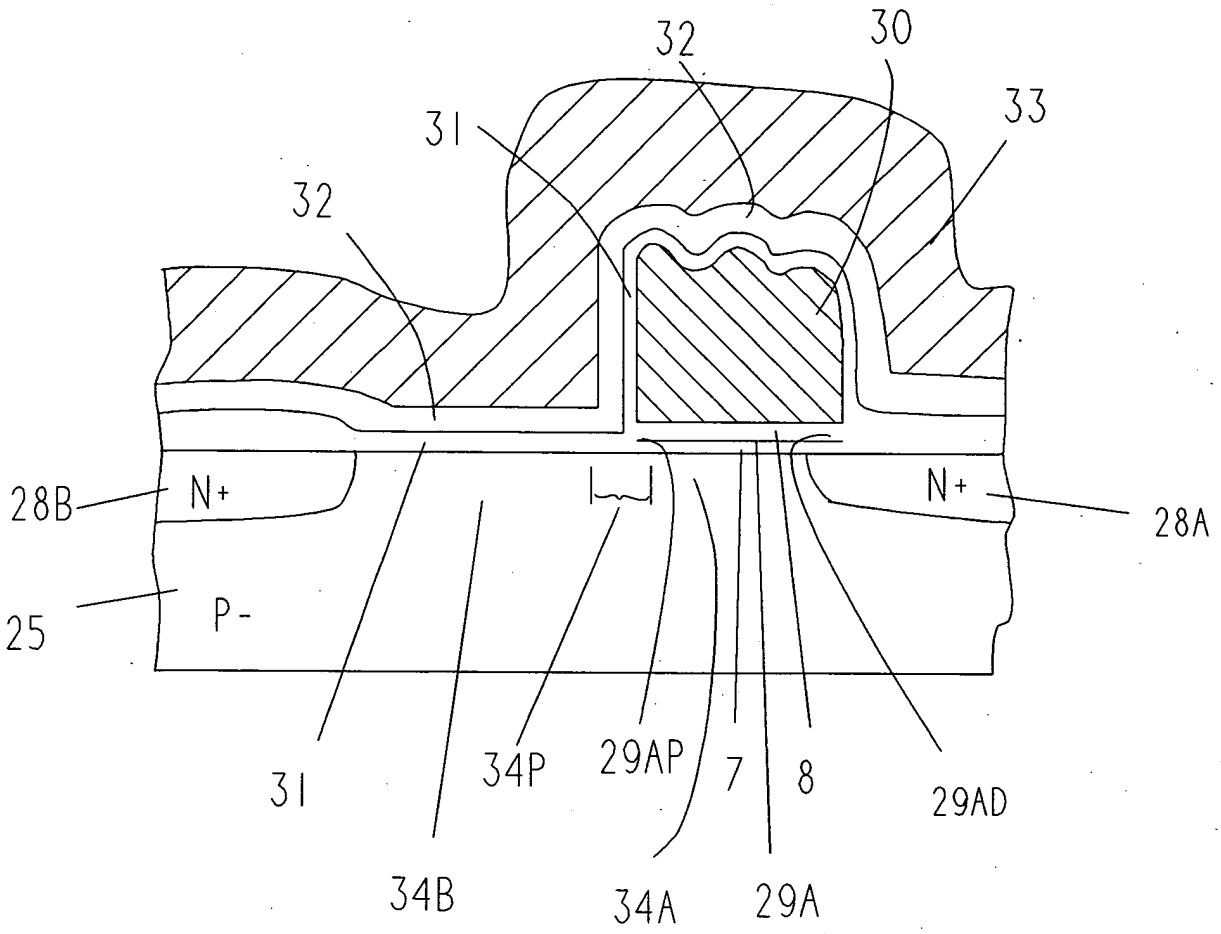

FIG. 23B

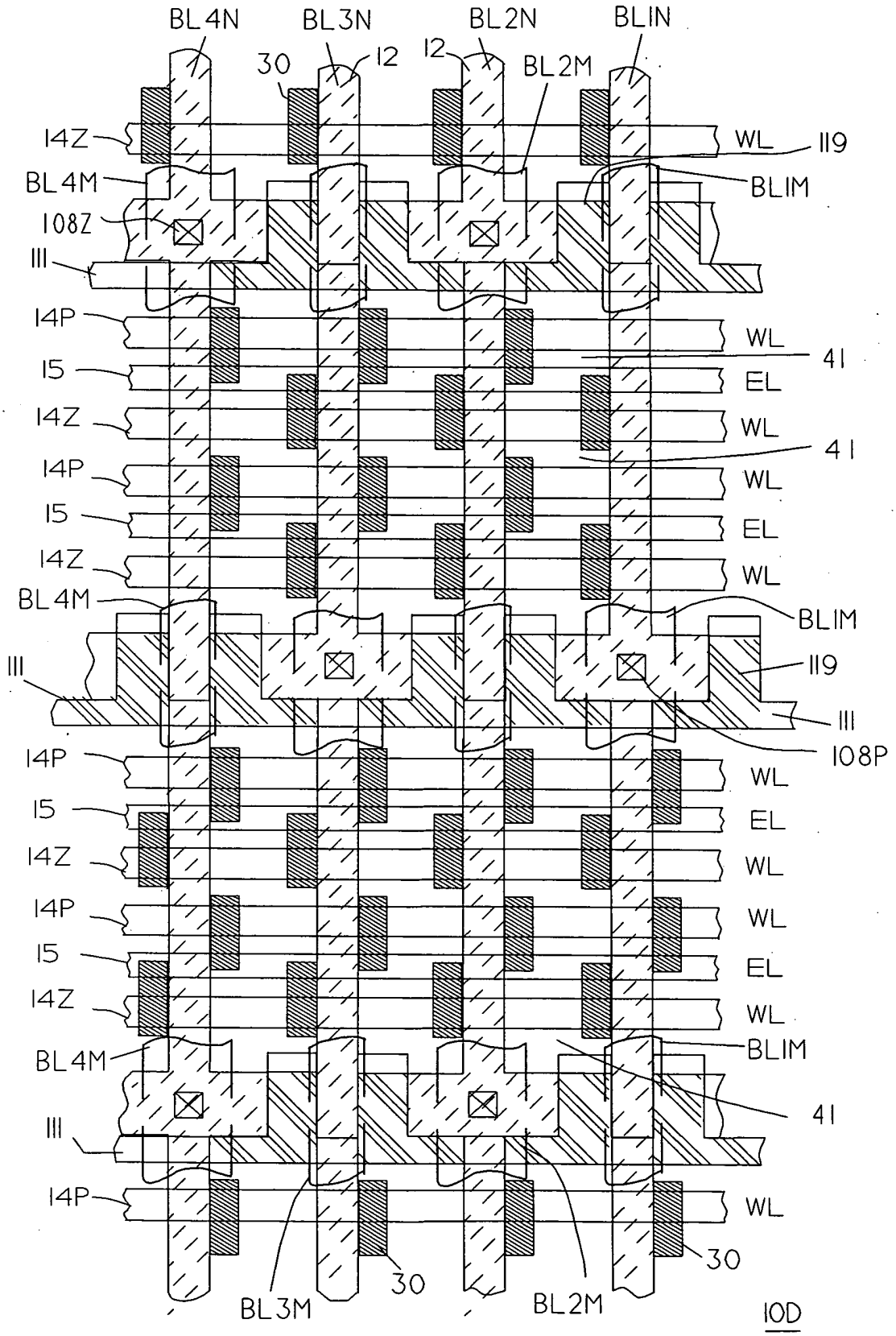
BL4N
BL3N
BL2N
BL1N
30
12
12
BL2M
14Z
WL
119
BL4M
BL1M
108Z
111
14P
WL
41
15
EL
14Z
WL
41
14P
WL
15
EL
14Z
WL
BL4M
BL1M
111
119
111
108P
14P
WL
15
EL
14Z
WL
14P
WL
15
EL
14Z
WL
BL4M
BL1M
41
111
14P
WL
30
BL3M
30
BL2M
10D

FIG. 24

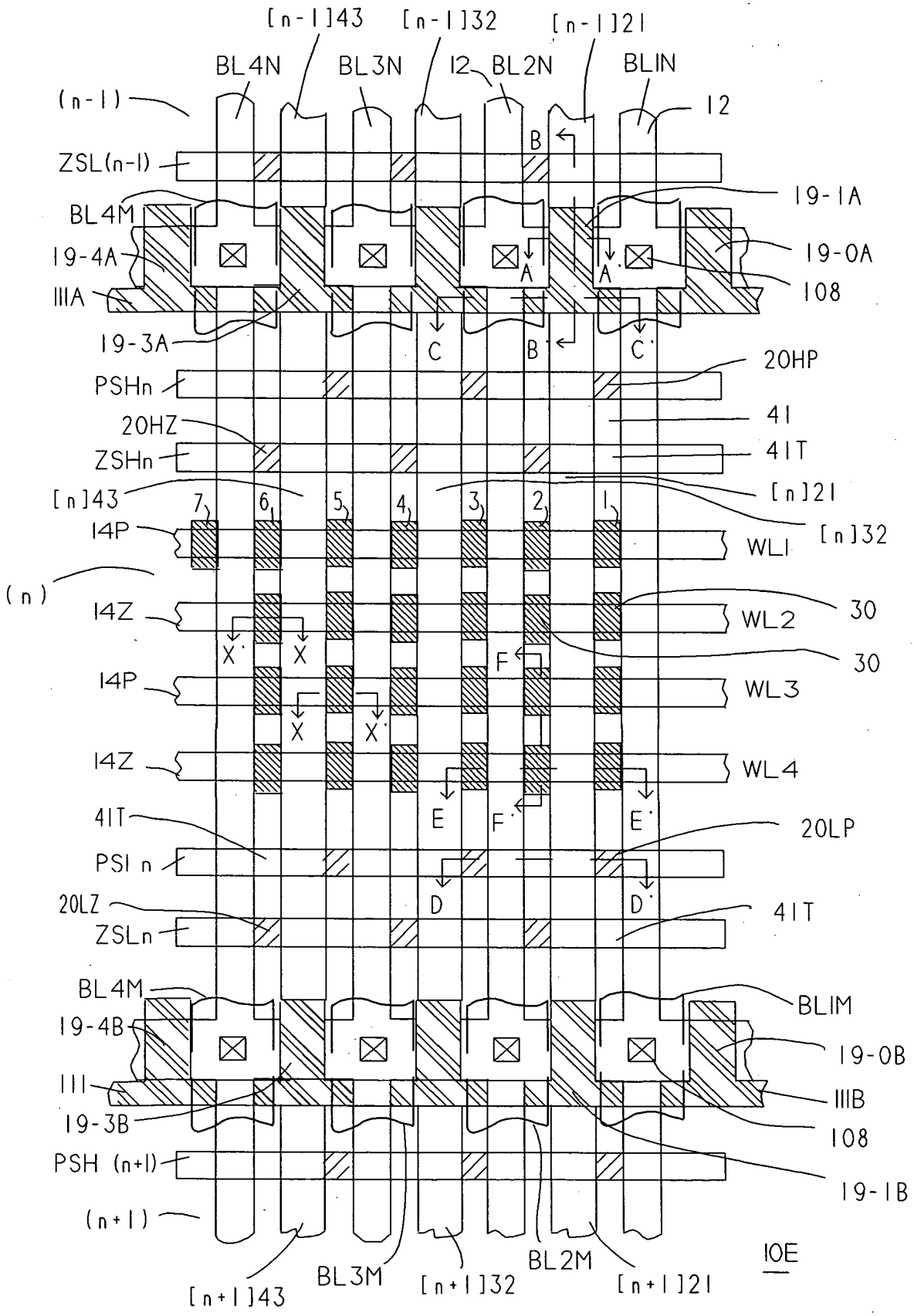
[n-1]43
[n-1]32
[n-1]21
BL4N
BL3N
12
BL2N
BLIN
12
(n-1)
ZSL(n-1)
B
19-1A
BL4M
19-4A
19-0A
A
A
111A
108
19-3A
C
B
C
20HP
PSHn
41
20HZ
41T
ZSHn
[n]21
[n]43
7
6
5
4
3
2
1
[n]32
14P
WL1
(n)
14Z
30
WL2
X
X
F
30
14P
WL3
X
X
14Z
WL4
E
F
E
41T
20LP
PSI n
D
D
20LZ
41T
ZSLn
BL4M
BLIM
19-4B
19-0B
111
111B
19-3B
108
PSH (n+1)
19-1B
(n+1)
BL3M
BL2M
10E
[n+1]43
[n+1]32
[n+1]21

FIG. 25

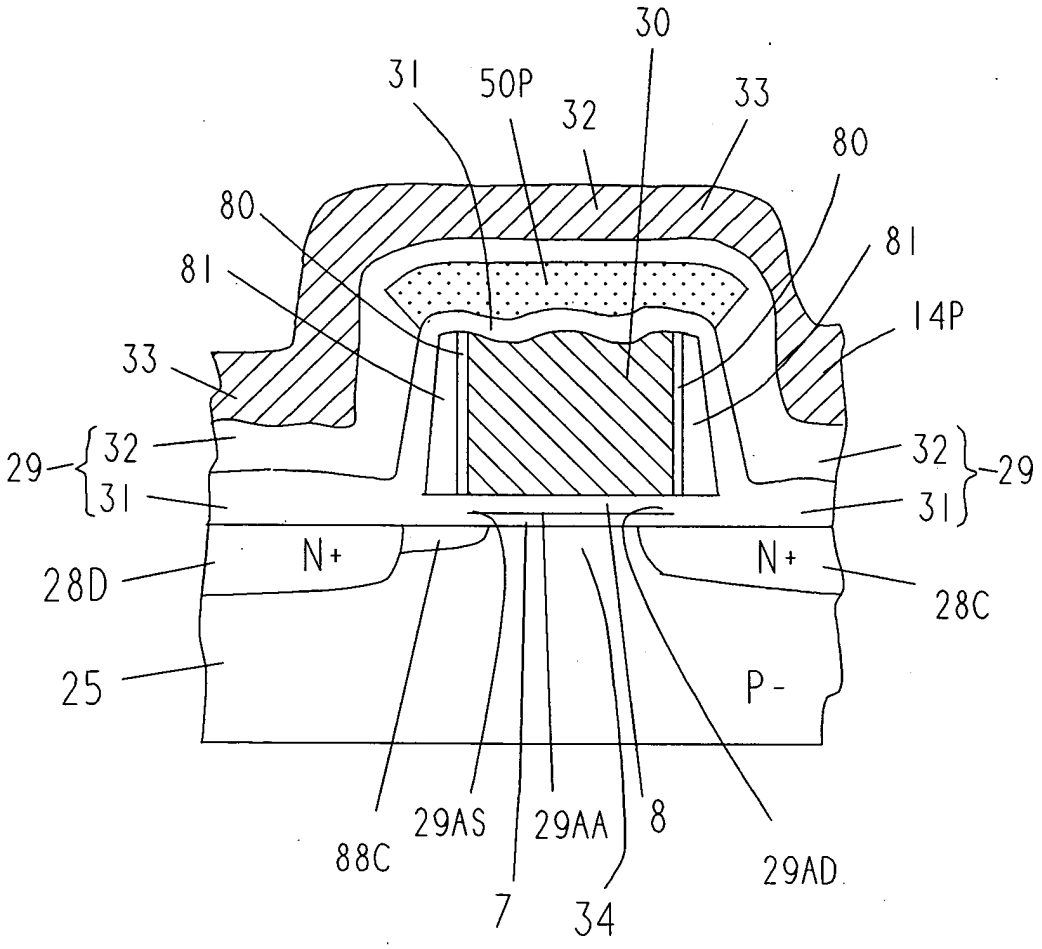
30
31
50P
32
33
80
80
81
81
14P
33
29
32
31
32
31
29
N+
N+
28D
28C
25
P-
88C
29AS
29AA
8
29AD
7
34

FIG. 26

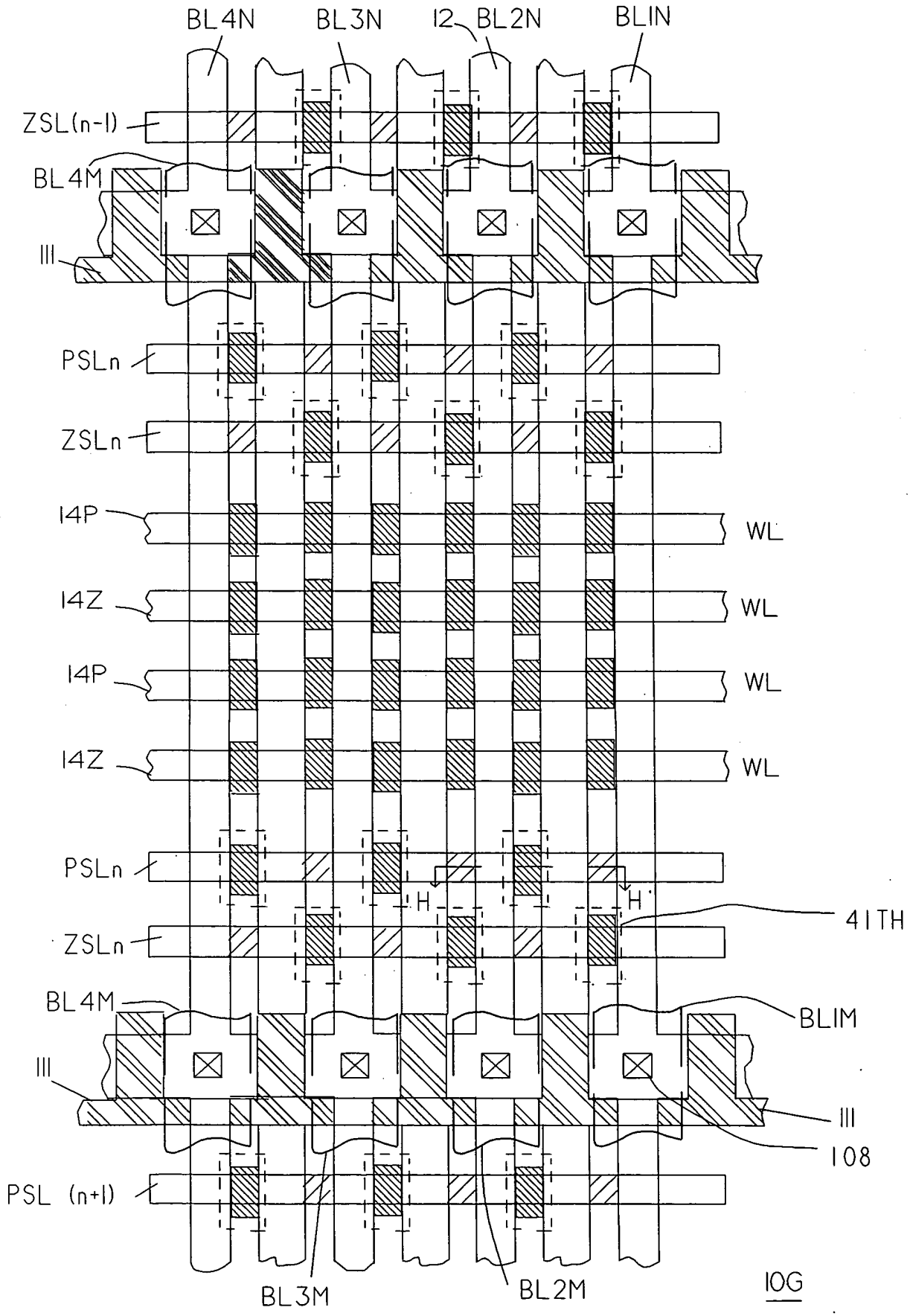
BL4N
BL3N
12
BL2N
BLIN
ZSL(n-1)
BL4M
111
PSLn
ZSLn
14P
WL
14Z
WL
14P
WL
14Z
WL
PSLn
H
H
41TH
ZSLn
BL4M
BLIM
111
111
108
PSL (n+1)
BL3M
BL2M
10G

FIG. 27

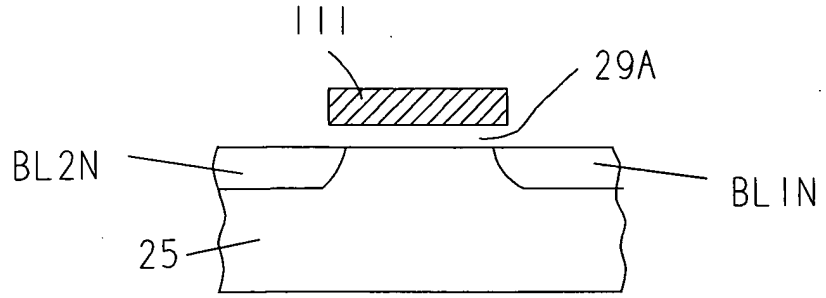

FIG. 28A

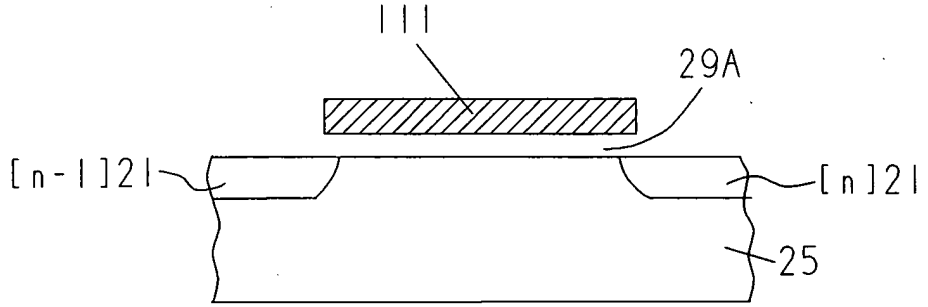

FIG. 28B

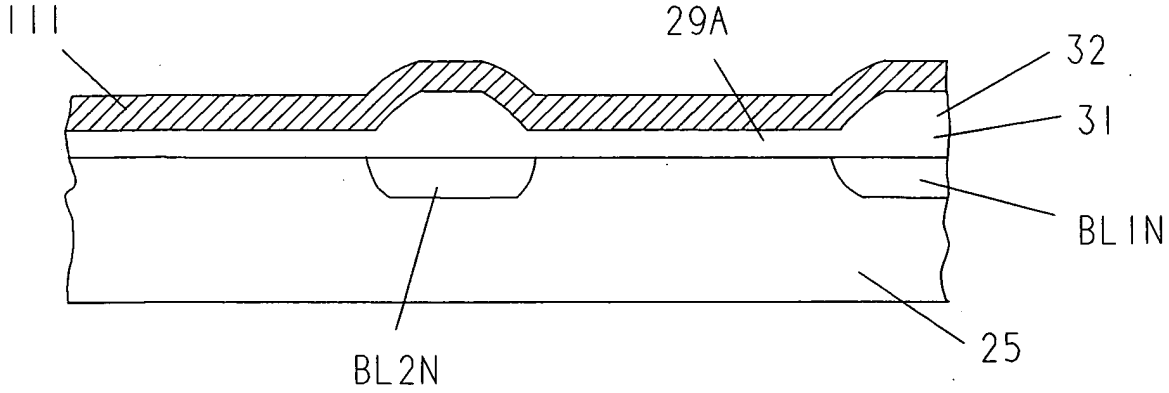

FIG. 28C

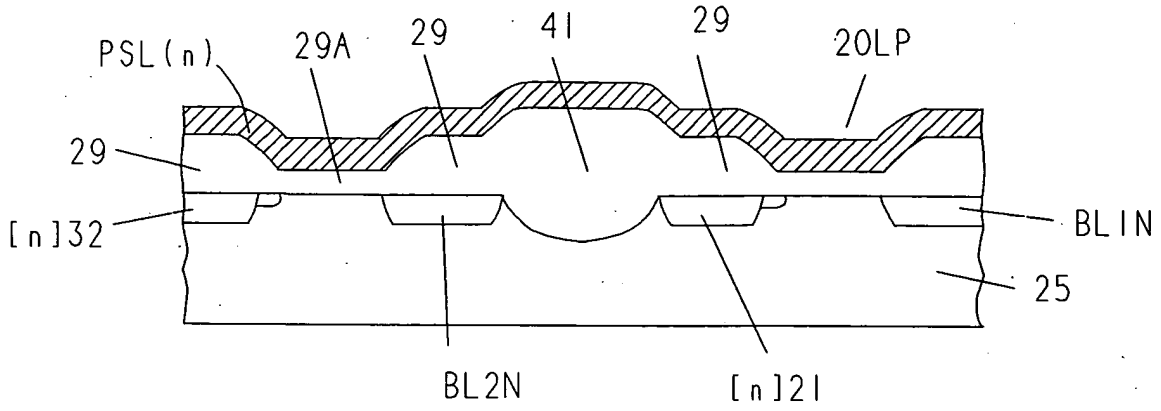

FIG. 28D

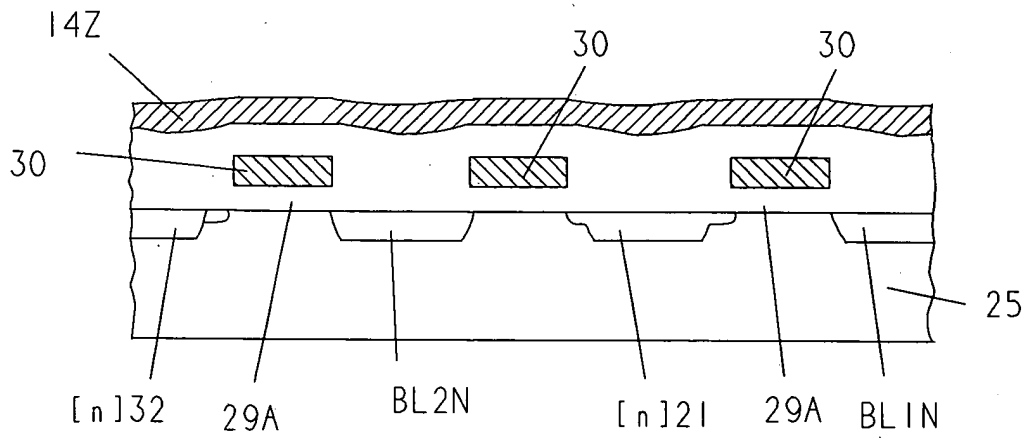

FIG. 29A

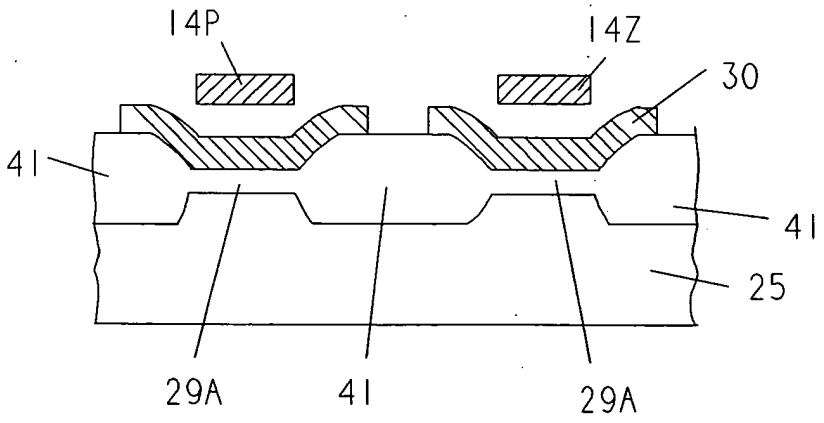

FIG. 29B

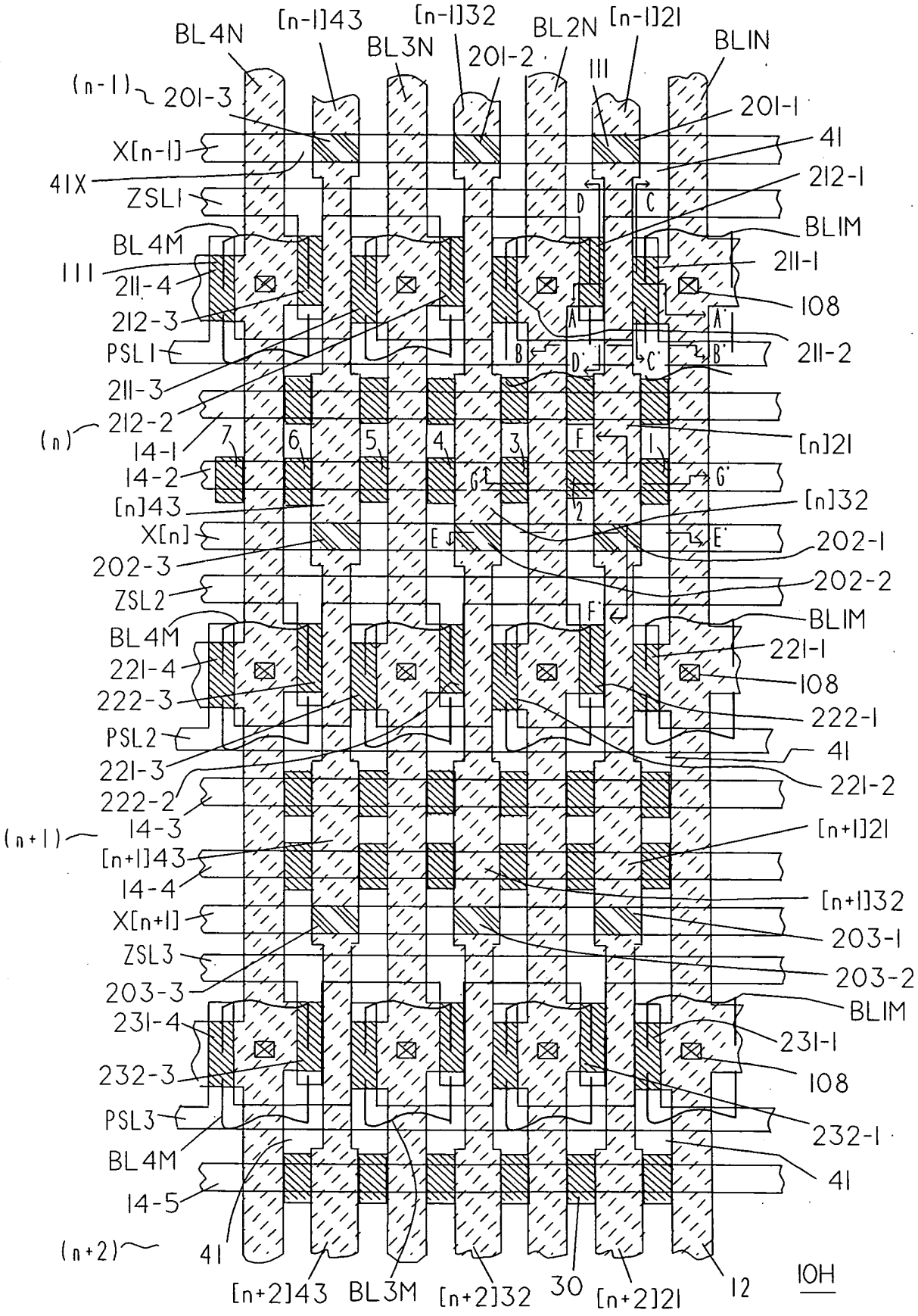
BL4N
[n-1]43
BL3N
[n-1]32
201-2
BL2N
[n-1]21
BLIN
(n-1)
201-3
111
201-1
X[n-1]
41
41X
212-1
ZSL1
D
C
BL4M
BLIM
111
211-4
211-1
212-3
108
A
A'
PSL1
B
D'
C'
B'
211-2
211-3
212-2
(n)
14-1
7
6
5
4
3
F
1
[n]21
14-2
G
G'
2
[n]43
[n]32
X[n]
E
E'
202-1
202-3
202-2
ZSL2
F'
BL4M
BLIM
221-4
221-1
222-3
108
222-1
PSL2
41
221-3
221-2
222-2
14-3
(n+1)
[n+1]21
[n+1]43
14-4
[n+1]32
X[n+1]
203-1
ZSL3
203-2
203-3
BLIM
231-4
231-1
232-3
108
PSL3
232-1
BL4M
41
14-5
(n+2)
41
[n+2]43
BL3M
[n+2]32
30
[n+2]21
12
10H

FIG. 30

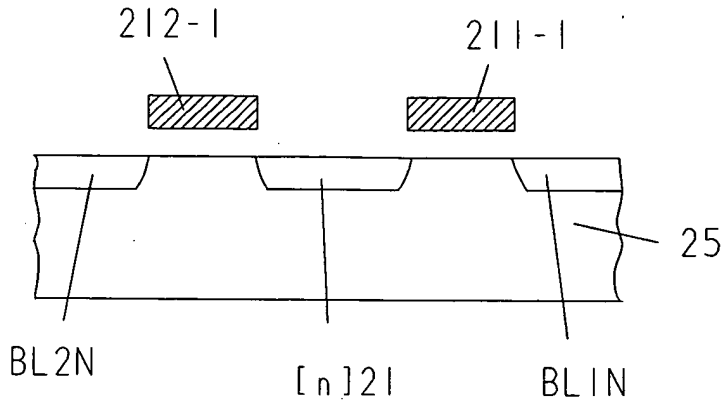

FIG. 31A

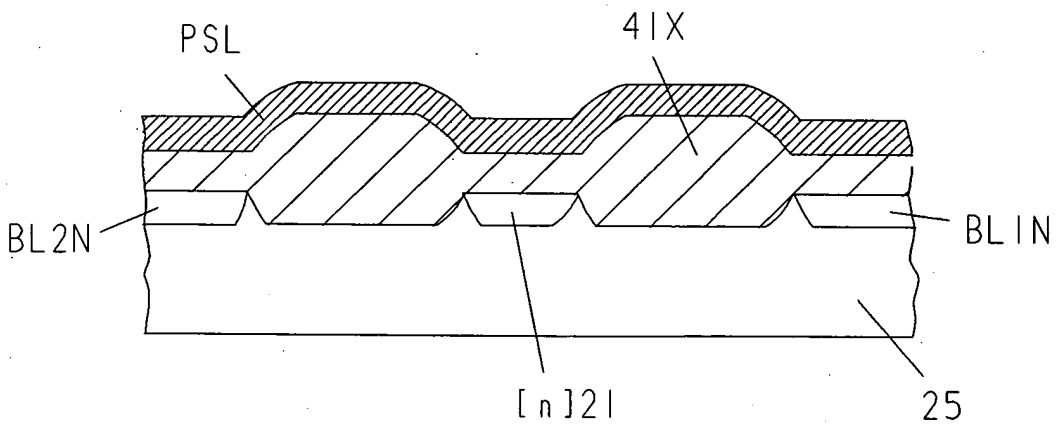

FIG. 31B

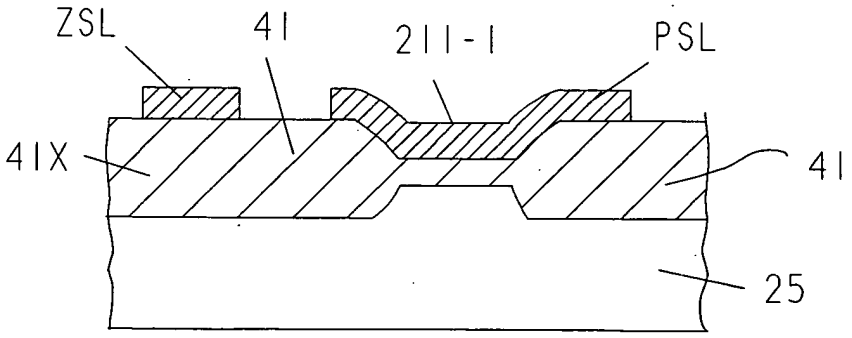

FIG. 31C

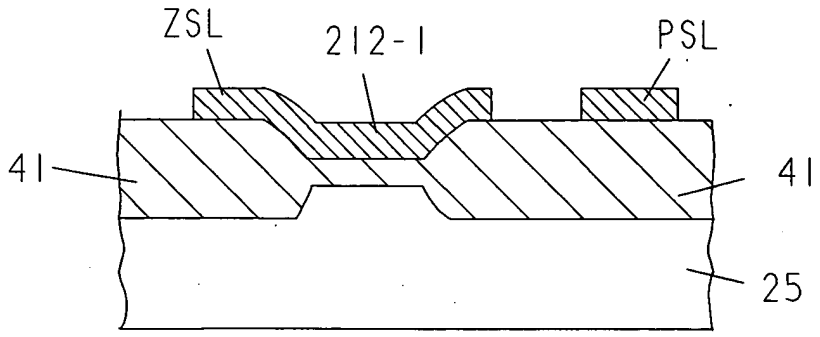

FIG. 31D

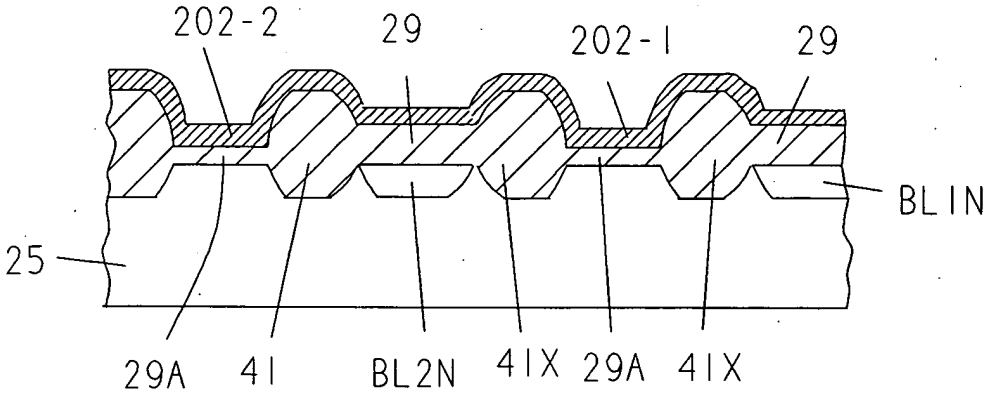

FIG. 31B

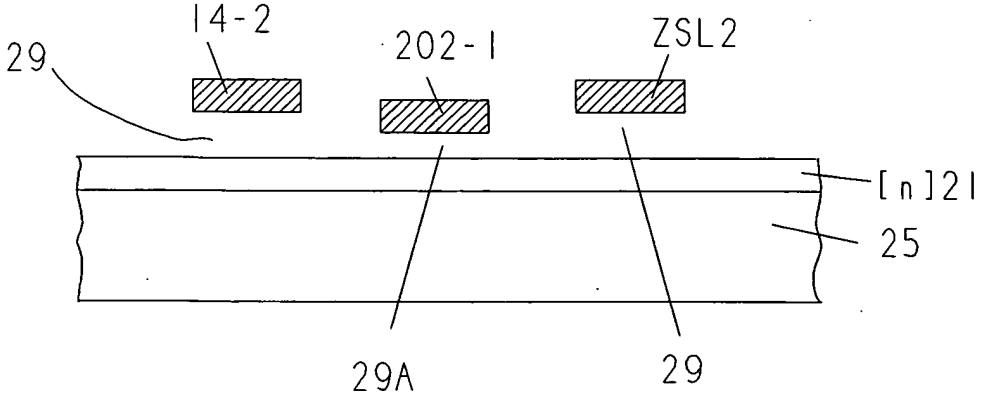

FIG. 31F

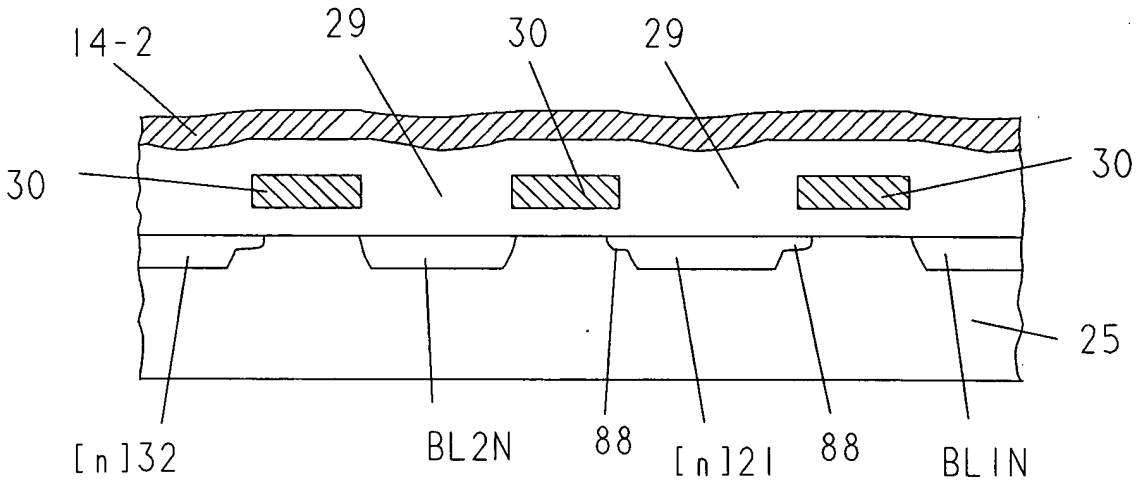

FIG. 31G

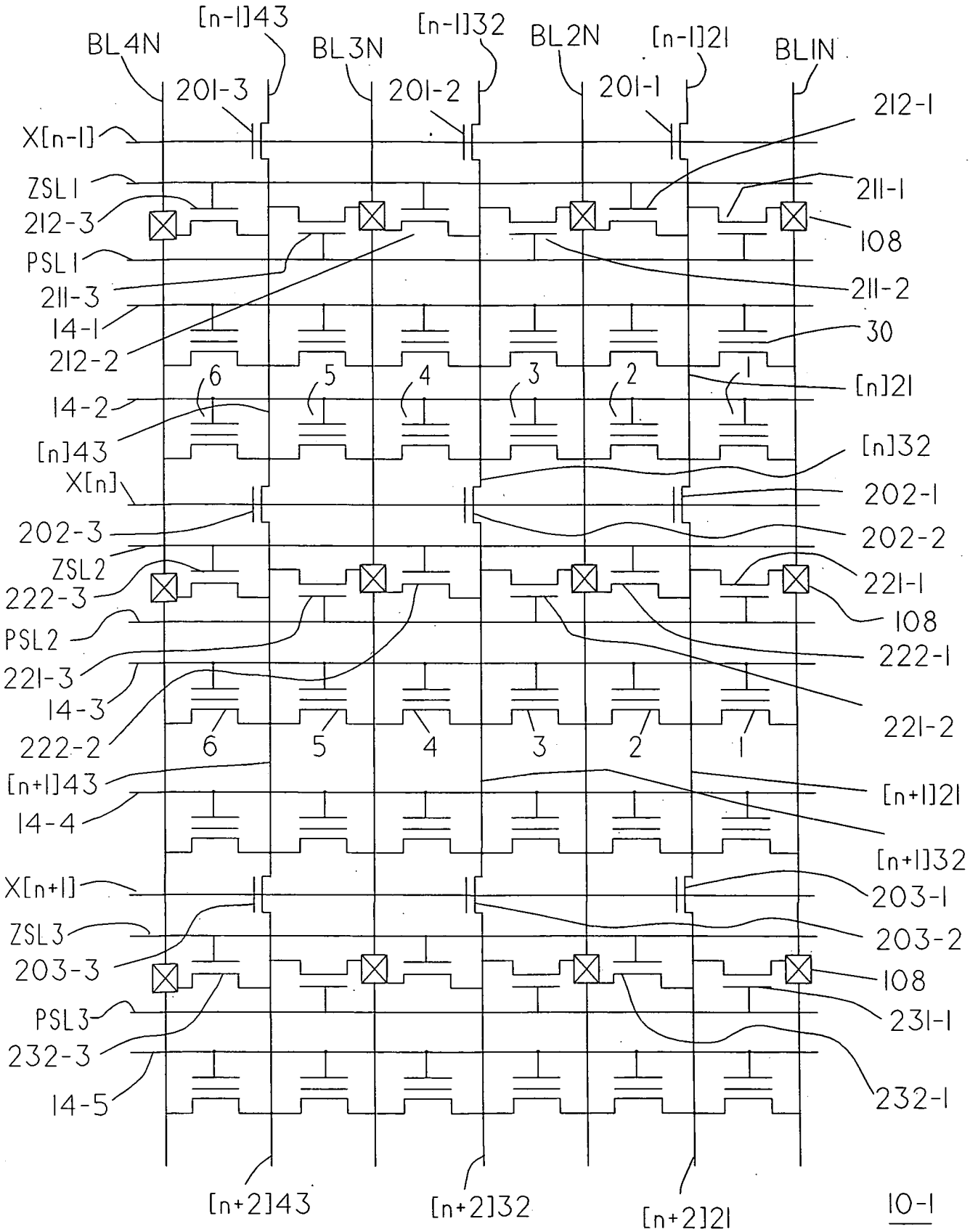
BL4N
[n-1]43
BL3N
[n-1]32
BL2N
[n-1]21
BL1N
201-3
201-2
201-1
X[n-1]
212-1
ZSL1
211-1
212-3
108
PSL1
211-2
211-3
14-1
30
212-2
6
5
4
3
2
1
[n]21
14-2
[n]43
[n]32
X[n]
202-1
202-3
202-2
ZSL2
221-1
222-3
108
PSL2
222-1
221-3
14-3
221-2
222-2
6
5
4
3
2
1
[n+1]43
[n+1]21
14-4
[n+1]32
X[n+1]
203-1
ZSL3
203-2
203-3
108
PSL3
231-1
232-3
14-5
232-1
[n+2]43
[n+2]32
[n+2]21
10-1

FIG. 32

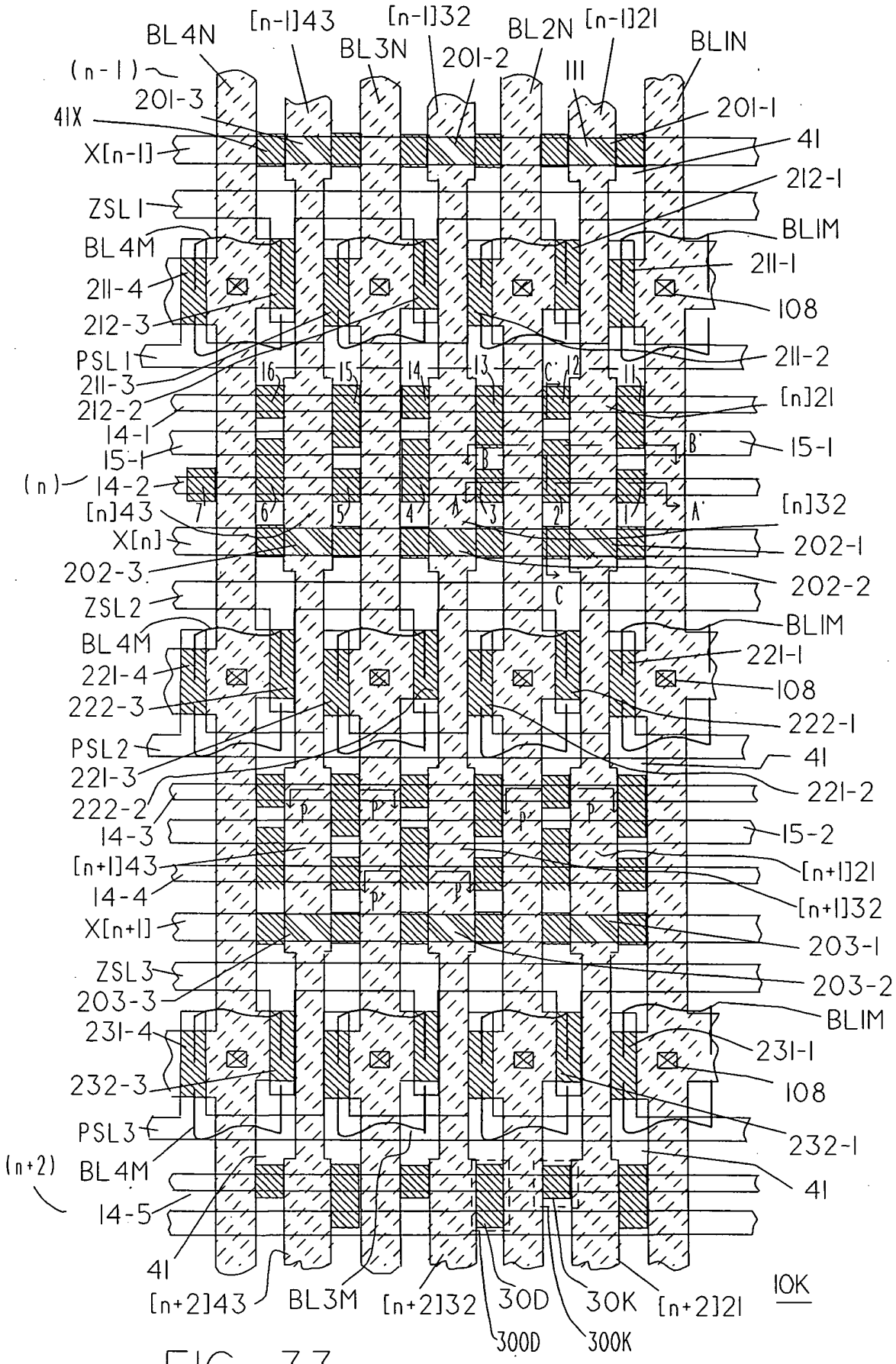
BL4N
[n-1]43
BL3N
[n-1]32
201-2
BL2N
[n-1]21
111
BL1N
(n-1)
201-3
201-1
41X
41
X[n-1]
212-1
ZSL1
BL1M
BL4M
211-1
211-4
108
212-3
PSL1
211-2
211-3
[n]21
212-2
14-1
15-1
15-1
(n)
14-2
[n]43
[n]32
X[n]
202-1
202-3
202-2
ZSL2
BL1M
BL4M
221-1
221-4
108
222-3
222-1
PSL2
41
221-3
221-2
222-2
14-3
15-2
[n+1]43
[n+1]21
14-4
[n+1]32
X[n+1]
203-1
ZSL3
203-2
203-3
BL1M
231-4
231-1
232-3
108
PSL3
232-1
(n+2)
BL4M
41
14-5
41
[n+2]43
BL3M
[n+2]32
30D
30K
[n+2]21
10K
300D
300K

FIG. 33

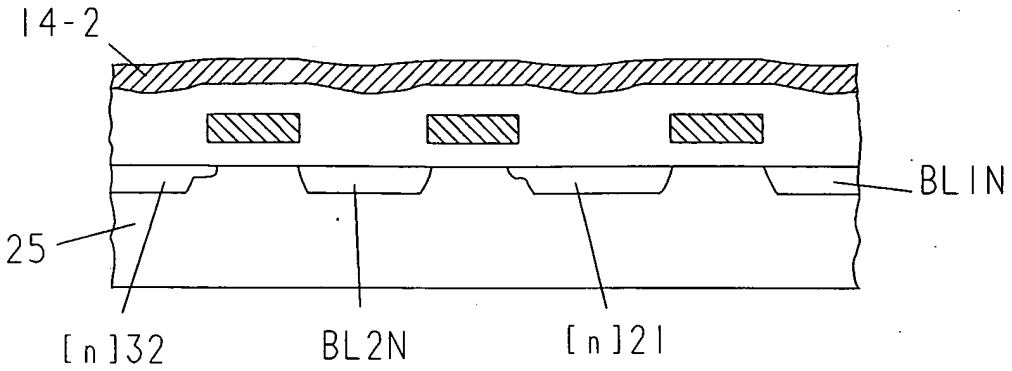

FIG. 34A

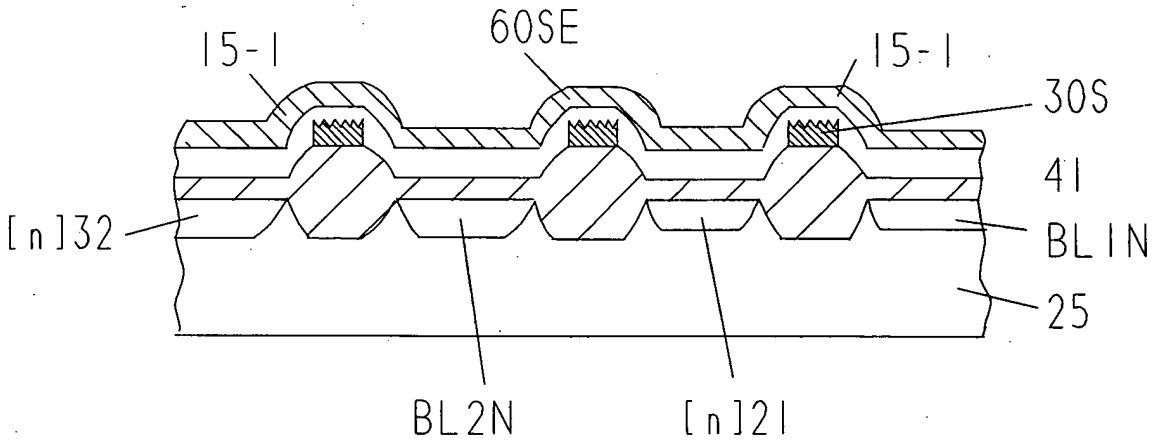

FIG. 34B

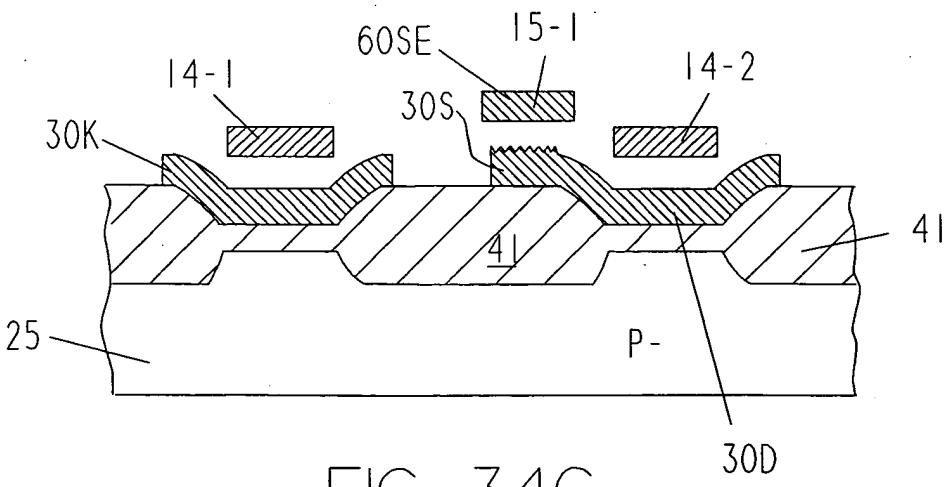

FIG. 34C

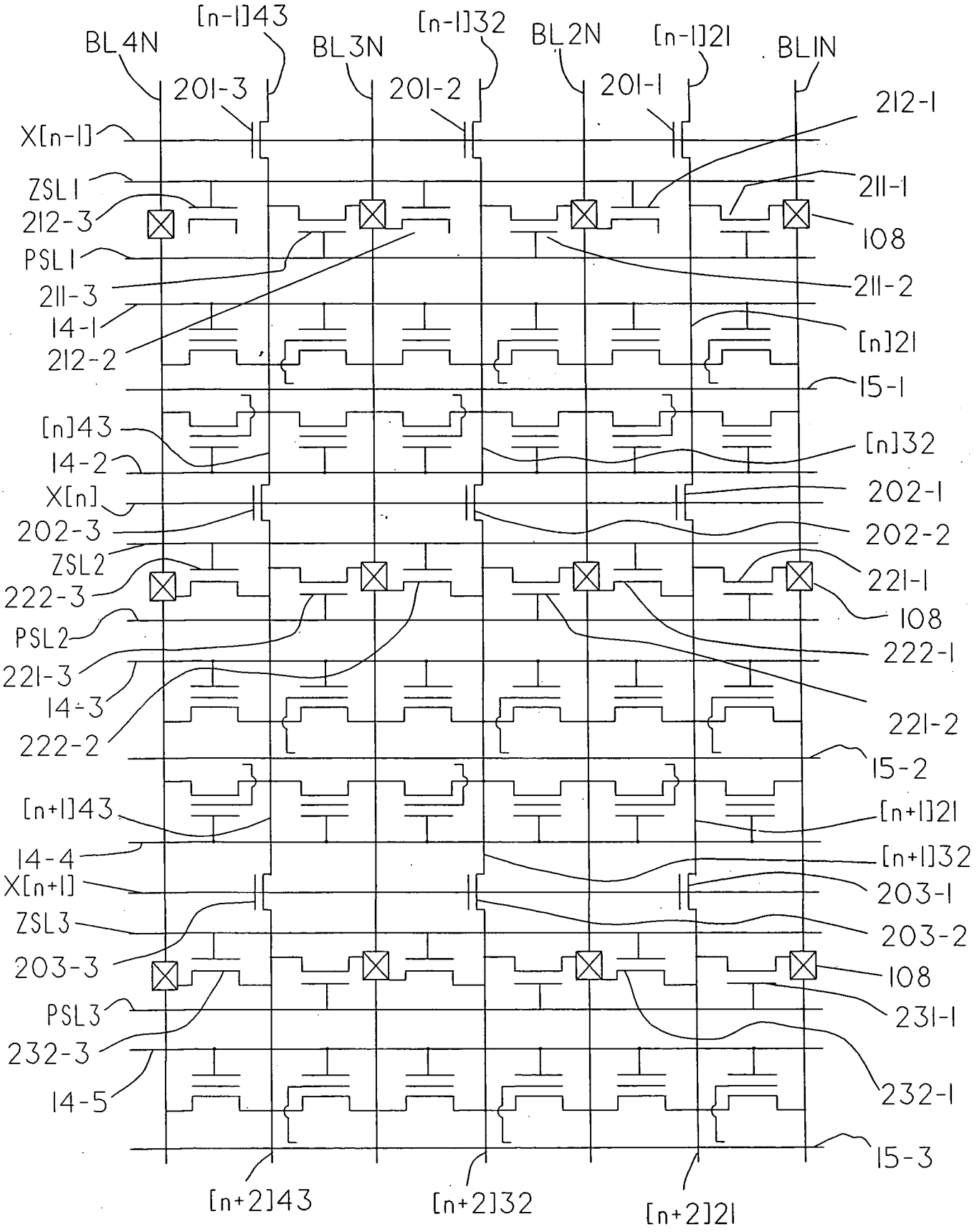
BL4N
[n-1]43
BL3N
[n-1]32
BL2N
[n-1]21
BLIN
201-3
201-2
201-1
212-1
X[n-1]
ZSL1
211-1
212-3
108
PSL1
211-3
211-2
14-1
[n]21
212-2
15-1
[n]43
[n]32
14-2
X[n]
202-1
202-3
202-2
ZSL2
221-1
222-3
108
PSL2
222-1
221-3
14-3
221-2
222-2
15-2
[n+1]43
[n+1]21
14-4
[n+1]32
X[n+1]
203-1
ZSL3
203-2
203-3
108
PSL3
231-1
232-3
232-1
14-5
15-3
[n+2]43
[n+2]32
[n+2]21

FIG. 35

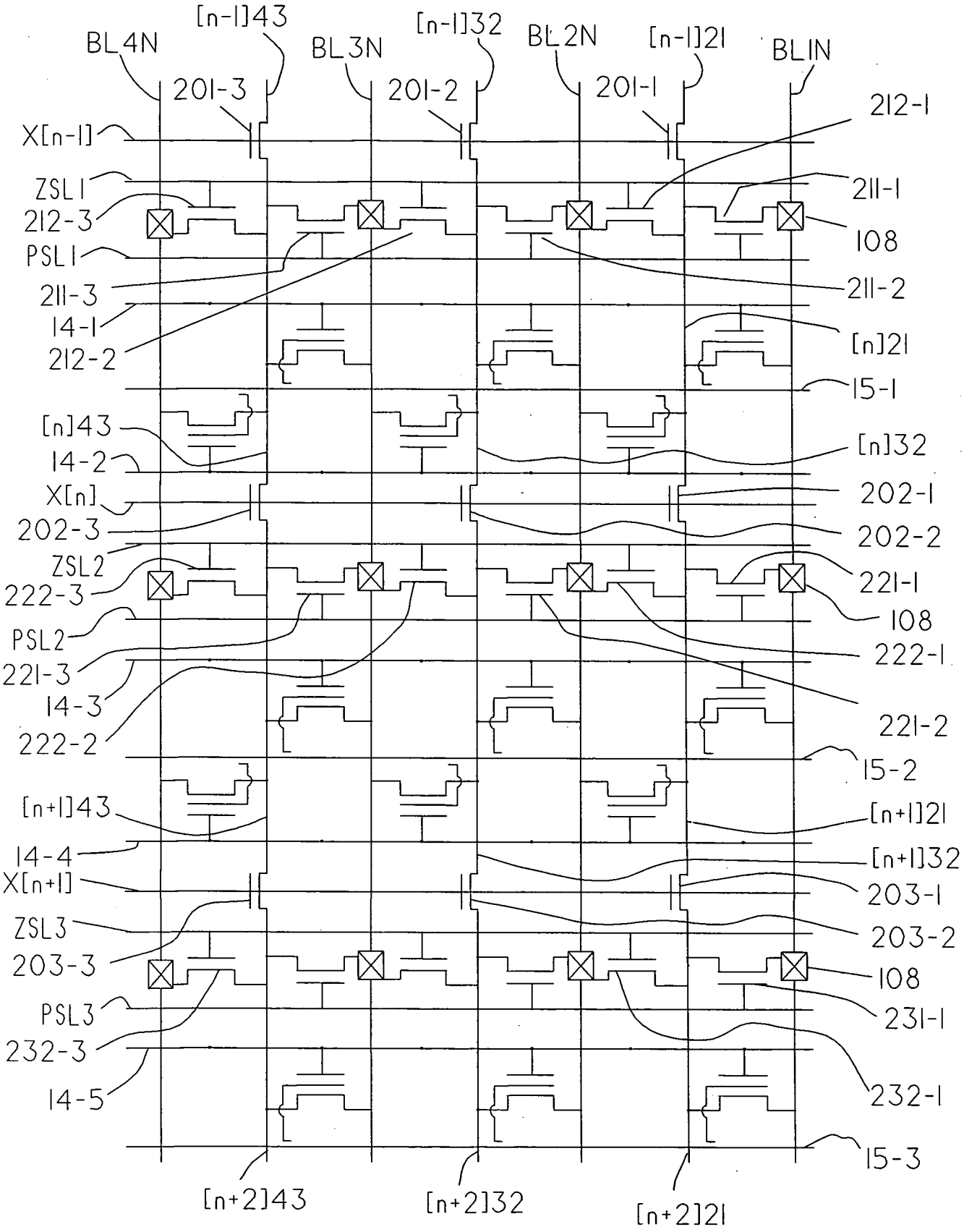
BL4N
[n-1]43
BL3N
[n-1]32
BL2N
[n-1]21
BL1N
201-3
201-2
201-1
X[n-1]
212-1
ZSL1
211-1
212-3
108
PSL1
211-3
211-2
14-1
[n]21
212-2
15-1
[n]43
[n]32
14-2
X[n]
202-1
202-3
202-2
ZSL2
221-1
222-3
108
PSL2
222-1
221-3
14-3
221-2
222-2
15-2
[n+1]43
[n+1]21
14-4
[n+1]32
X[n+1]
203-1
ZSL3
203-2
203-3
108
PSL3
231-1
232-3
232-1
14-5
15-3
[n+2]43
[n+2]32
[n+2]21

FIG. 36